



सत्यमेव जयते

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PART III—SECTION 1

Notifications issued by the High Courts, the Comptroller and Auditor General, the Union Public Service Commission, the Indian Government Railways and by Attached and Subordinate Offices of the Government of India

UNION PUBLIC SERVICE COMMISSION

New Delhi-11, the 16th March 1964

No. F. 6/7/63-Ests(A)—Shri B. K. Lal, a permanent officer in the Section Officers' Grade of the Central Secretariat Service cadre of the Union Public Service Commission appointed to officiate in Grade I of the Service vide this office notification of even number dated the 24th January, 1964 relinquished charge of the office of Under Secretary, Union Public Service Commission, with effect from the afternoon of 13th March, 1964.

2. On his reversion, Shri B. K. Lal resumed charge of the office of the Section Officer, Union Public Service Commission, with effect from the afternoon of 13th March, 1964.

No. F. 6/7/63-Ests(A)—Shri R. L. Jhingan, a permanent Assistant of the Central Secretariat Service cadre of the Union Public Service Commission, appointed to officiate in the Section Officers' Grade of the Service, vide this office notification of even number dated the 14th January, 1964, has been reverted as Assistant with effect from the afternoon of 13th March, 1964.

R. K. G. RAU

Under Secretary (Incharge of Admn.),
Union Public Service Commission

MINISTRY OF HOME AFFAIRS

Intelligence Bureau

New Delhi, the 16th March 1964

No. 8/SIB(C-I)/57(110)—The Director, Intelligence Bureau, hereby appoints Shri Banarsi Prasad an officer of the Bihar State Police at present on deputation to the office of Central Intelligence Officer, Patna, as Assistant Central Intelligence Officer Gr. I, as Deputy Central Intelligence Officer, Patna, in the office of the Central Intelligence Officer, Patna, with effect from the afternoon of 21-2-1964, in a temporary capacity until further orders.

N. K. RAY

Deputy Director,
For Director

Office of the Competent Authority

New Delhi-11, the 16th March 1964

F. 2/21/64-Judl. II.—Notice is hereby given by the Competent Authority in pursuance of rule 6 of the Notaries Rules, 1956, that application has been made to the said authority under rule 4 of the said Rules, by Shri Subodh Kumar Mullick, Partner of Messrs. Sandersons & Morgans, Solicitors, Royal Insurance Buildings, 5 & 7, Netaji Subhas Road, Calcutta-1, for appointment as a notary to practise in the Union of India,

Any objection to the appointment of the said person as a notary may be submitted in writing to the undersigned within fourteen days of the publication of this notice.

MANGLI PRASAD

Competent Authority

NATIONAL ACADEMY OF ADMINISTRATION

Mussoorie, the 2nd March 1964

No. 107/1/62-Adm.—Shri R. S. K. Joshi is appointed as a temporary Assistant Professor of Hindi in the scale of Rs. 590—30—830—35—900 in the National Academy of Administration, Ministry of Home Affairs, Mussoorie, with effect from 2nd March, 1964, and until further orders.

M. A. S. RAJAN

Deputy Director (Senior)
for Director

INDIAN AUDIT AND ACCOUNTS DEPARTMENT

Office of the Director of Commercial Audit

New Delhi, the 16th March 1964

No. 5038-Adm./9-11/63-64-Vol. II—1. The Director of Commercial Audit is pleased to grant Shri S. L. Srivastava, a member of the S.A.S. (Commercial) of the Office of the Accountant General, Uttar Pradesh, on deputation to the Indian Institute of Technology, Kanpur, proforma promotion in the Assistant Audit Officers' grade in the Commercial Audit Organisation with effect from 1-10-1963, until further orders.

2. The Director of Commercial Audit is pleased to appoint Shri A. S. Venkataraman, a member of the S.A.S. (Commercial) of the Office of the Accountant General, Madras, to officiate as an Assistant Audit Officer (Commercial), in the Commercial Audit Wing of the Office of the Accountant General, Assam & Nagaland, with effect from 20-1-1964, until further orders.

3. The Director of Commercial Audit is pleased to appoint Shri R. Verma, a member of the S.A.S. (Commercial) of the Office of the Accountant General, Punjab, to officiate as an Assistant Audit Officer in the Office of the Deputy Director of Commercial Audit, Calcutta, with effect from 14-2-1964, until further orders.

4. The Director of Commercial Audit is pleased to appoint Shri V. L. Govindaswamy, a member of the S.A.S. (Commercial) of the Office of the Senior Deputy Director of Commercial Audit, Bangalore to officiate as an Assistant Audit Officer (Commercial) in the Commercial Audit Wing of the Office of the Accountant General, Andhra Pradesh, Hyderabad, with effect from 14-2-1964, until further orders.

5. The Director of Commercial Audit is pleased to appoint Shri K. K. Gaddi, a member of the S.A.S. (Commercial) of the Office of the Accountant General, Punjab to officiate as an Assistant Audit Officer (Commercial) in the Commercial Audit Wing of the Office of the Accountant General, Bihar, with effect from 14-2-1964, until further orders.

6. The Director of Commercial Audit is pleased to appoint Shri A. S. Venkatesan, a member of the S.A.S. (Commercial) of the Office of the Accountant General, Madras to officiate as an Assistant Audit Officer (Commercial) in the Commercial Audit Wing of the Office of the Accountant General, Andhra Pradesh, Hyderabad with effect from 17-2-1964, until further orders.

B. L. BOIPAI
Deputy Director of Commercial Audit

Office of the Comptroller & Auditor General of India

New Delhi, the 18th March 1964

No. 465-GEI/K.21/Pt. IV—Shri Y. Krishan, Accountant General, Punjab, Simla, was granted Earned Leave for 59 days w.e.f. 15th January 1964 to 13th March 1964, with permission to suffix second Saturday and Sunday on 14th and 15th March 1964, to the leave.

Shri H. B. Bhar will hold the charge of the post of Accountant General, Punjab, Simla, in addition to his own duties as the Accountant General, Posts and Telegraphs, Simla, during Shri Y. Krishan's absence on leave.

No. 653-GEI/G-10/P.F. II—Consequent on Shri G. B. Singh, proceeding on training in the National Defence College, New Delhi, Shri P. C. Dosi, Assistant Chief Auditor in the office of Chief Auditor, Northern Railway, New Delhi held the additional current charge of the post of Chief Auditor, Northern Railway, New Delhi, from the afternoon of 14th January 1964 to the afternoon of 17th January 1964.

On transfer from the post of Chief Auditor, Eastern Railway, Calcutta, Shri M. P. Gupta has been posted as the Chief Auditor, Northern Railway, New Delhi w.e.f. the afternoon of 17th January 1964.

No. 727-GEI/S-73/PF—On relief from the post of Under Secretary, Ministry of Defence, New Delhi, and on reversion to Indian Audit and Accounts Department, Sri S. Soundarajan (II) has been posted as Deputy Accountant General, Andhra Pradesh, Madras, with effect from the afternoon of 12th February 1964, until further orders.

No. 738-GEI/G.10/PF. II—Shri M. P. Gupta, Chief Auditor, Northern Railway, New Delhi, has been granted Earned Leave for 11 days from 24th February to 5th March 1964 with permission to prefix Sunday on 23rd February 1964, to the leave.

Shri R. K. Khanna, I.A.A.S., will temporarily hold charge of the post of Chief Auditor, Northern Railway, New Delhi in addition to his own duties as Accountant General, Central Revenues, New Delhi, during Shri Gupta's absence on leave.

M. S. BHATNAGAR
Dy. Compt. & Auditor General of India

Office of the Accountant General, Commerce, Works & Miscellaneous

New Delhi, the 8th March 1964

No. ADMN.I/41(132)/8657-63—Shri H. R. Kapoor, S.A.S. Accountant of this organisation has been promoted as an officiating Assistant Accounts Officer with effect from 24th February 1964 (F.N.) and has been posted in the office of the Dy. Accountant General, C. W. & M., Bombay w.e.f. the same date *vice* Shri S. T. Athalye, Asstt. A/cs. Officer whose services have been placed at the disposal of General Insurance Council.

P. K. RAU
Accountant General

Office of the Accountant General, Maharashtra

Bombay, the 17th March 1964

No. 12—The Accountant General, Maharashtra is pleased to appoint Shri B. V. Kulkarni, a member of the S.A.S. to officiate as an Asstt. Accounts Officer in his office with effect from 3-3-1964 A.N., until further orders.

M. M. B. ANNAVI
Dy. Accountant General (A)

Office of the Chief Auditor, Northern Railway

New Delhi, the 21st March 1964

No. Admn/8-7/62/7—Shri Lila Dhar, a member of the Subordinate Railway Audit Service of this Office has been promoted to officiate as Assistant Audit Officer with effect from 29th February, 1964, until further orders.

M. P. GUPTA
Chief Auditor

MINISTRY OF DEFENCE ML & C Dte

New Delhi, the 12th March 1964

No. 40/4/ADM/L&C/63—The undermentioned transfer and posting is made :—

On completion of his training Shri B. I. Choudhri tempy. Assistant Military Estates Officer (Class II) is posted as Assistant Military Estates Officer in the office of the Military Estates Officer, Ambala Circle, Ambala Cantonment, 13th November, 1963.

GAJENDRA SINGH
Deputy Director
Military Lands and Cantonments

MINISTRY OF LABOUR AND EMPLOYMENT Mica Mines Labour Welfare Organisation

Dhanbad, the 10th March 1964

No. Mica-4(51)/57/774—Dr. T. D. Choudhary, C.A.S., Grade II, has been appointed as Assistant Surgeon, Grade I, temporarily under the Mica Mines Labour Welfare Fund, Bihar with effect from the 21st December 1963 (forenoon).

Sd./- ILLEGIBLE
Welfare Commissioner
Mica Mines Labour Welfare Fund

Office of the Chief Labour Commissioner (Central)

New Delhi-1, the 17th March 1964

No. Adm.I/4(4)/62—Consequent on the shifting of the headquarters of the Labour Inspector (Central), Villupuram, to Tiruchirapalli, Shri I. Satyanarayana Rao, Labour Inspector (Central), relinquished charge at Villupuram on the afternoon of the 18th January 1964 and assumed charge in the same capacity at Tiruchirapalli on the forenoon of the 20th January 1964.

B. K. SAKSENA
Assistant Labour Commissioner

MINISTRY OF INDUSTRY Office of the Development Commissioner (Small Scale Industries)

New Delhi, the 13th March 1964

No. 2(6)/61-AI—The Development Commissioner, Small Scale Industries is pleased to redesignate the posts of Sub Editor (English) and Sub Editor (Hindi) in the

office of the Development Commissioner, Small Scale Industries, New Delhi as Assistant Editor with effect from the 27th February 1964.

The 20th March 1964

No. 2(6)/61-A-I—On redesignation of the permanent posts of Sub Editor (English) and Sub Editor (Hindi) as Assistant Editor, S/Shri V. S. Chopra and P. S. Mehta relinquished charge of the offices of Sub Editor (English) and Sub Editor (Hindi) respectively, and assumed charge of the office of Assistant Editor in the office of the Development Commissioner (Small Scale Industries), New Delhi with effect from the forenoon of 27th February, 1964.

J. S. BHATNAGAR
Asstt. Director (Admn.)
for Development Commissioner (SSI)

New Delhi, the 20th March 1964

No. 3/21/64-A.VI—The Development Commissioner (Small Scale Industries) is pleased to appoint Shri I. N. Saxena, Assistant Accounts Officer in the Small Industries Service Institute, Okhla, New Delhi, and Shri V. N. Bhardwaj, Assistant Accounts Officer in the Office of the Development Commissioner (Small Scale Industries), New Delhi, in a substantive capacity to the permanent posts of Assistant Accounts Officer in Small Industries Service Institute, Okhla, New Delhi, and Small Industries Service Institute, Calcutta, respectively with effect from 16th March, 1964.

N. KHOSLA
Joint Development Commissioner

Office of the Textile Commissioner

Bombay-1, the 16th March 1964

No. 5(3)/63-Control—In exercise of the powers conferred on me by Sub-Clause (a) of Clause 10 of the Woollen Textiles (Production and Distribution Control) Order, 1962, I hereby direct that every manufacturer of woollen cloth and yarn who is registered or licensed under

the Industries (Development and Regulation) Act, 1951 shall furnish to the Textile Commissioner, Economic Branch, Mistry Bhavan, Dinsha Wacha Road, Churchgate, Bombay and to the Regional Office of the Textile Commissioner at Bombay, Ahmedabad, Kanpur, Coimbatore, Calcutta, or Amritsar, within whose jurisdiction such manufacturer carries on business of producing yarn or cloth true and accurate information regarding :—

- (1) actual stoppage of work whether partial or full;
- (2) anticipated stoppage of work full or partial; and
- (3) Whether such stoppage is due to—
 - (a) strike by labour,
 - (b) lock-out by management,
 - (c) lay-off by management, or
 - (d) for any other reason.

And I further direct that such information shall be communicated telegraphically, immediately after stoppage or immediately on receipt of information regarding anticipated stoppage, and the telegram should be followed by a letter giving detailed information in the following form namely :—

- (i) Date and time of anticipated/actual stoppage.
- (ii) Section or shift affected.
- (iii) Reasons for the stoppage.
- (iv) Number of spindles and/or looms rendered idle.
- (v) Workers likely to be affected—
 - (a) Permanent,
 - (b) Badli, and
 - (c) Temporary.
- (vi) Anticipated daily loss in production of yarn and cloth.
- (vii) Steps proposed to be taken by the mill for resumption of working of the section/shift affected.
- (viii) other relevant details, if any.

N. SWAMI
Joint Textile Commissioner

ZOOLOGICAL SURVEY OF INDIA

Calcutta, the 19th March 1964

No. F. 13-1/62-Genl./3094.—The following Officers are appointed substantively to the permanent Class-II posts shown in col. 4, with effect from the dates shown against each in col. 5 below.

Sl. No.	Name of the Officer	Designation	Permanent post to which now appointed substantively	Dates of substantive appointment
1	2	3	4	5
1.	Dr. H. C. Ray	Sr. Zoological Asstt. (Subs.)	Asstt. Zoologist	8-3-1960
2.	Dr. A. G. K. Menon	Asstt. Zoologist (Quasi-permanent).	Asstt. Zoologist	8-3-1960
3.	Shri H. Khajuria	Zool. Asstt. (Subs.)	Asstt. Zoologist	21-2-1962
4.	„ Om Bahadur Chhotani	Zool. Asstt. (Subs.)	Asstt. Zoologist	27-4-1963
5.	„ A. K. Mukherjee	Zool. Asstt. (Subs.)	Asstt. Curator	27-4-1963
6.	„ G. Ramakrishna	Sr. Zool. Asstt. (Subs.)	Asstt. Zoologist	27-4-1963
7.	„ M. A. S. Menon	Sr. Zool. Asstt. (Subs.)	Asstt. Zoologist	27-4-1963
8.	„ G. Mathai*	Sr. Zool. Asstt. (Subs.)	Documentation Officer	27-4-1963 *(Since died on 8-1-1964).
9.	„ A. S. Rajagopal	Sr. Zool. Asstt. (Subs.)	Asstt. Zoologist	27-4-1963
10.	„ T. G. Vazirani	Zool. Asstt. (Subs.)	Asstt. Curator	27-4-1963
11.	Km. M. B. Kripalani	Zool Asstt. (Subs.)	Asstt. Zoologist	1-7-1963

M. L. ROONWAL
Director
Zoological Survey of India

GEOLOGICAL SURVEY OF INDIA*Calcutta-13, the 13th March 1964*

No. 2099N/1734(4)/19—The following temporary officers are declared Quasi-permanent in the grade of Driller, Geological Survey of India with effect from 1st July 1963 :—

- (1) Shri P. R. Genda
- (2) " H. S. Aswal
- (3) " B. B. Naik
- (4) " Hardit Singh
- (5) " Ramdeo Mahato
- (6) " A. M. M. Rao
- (7) " V. R. Swaminathan
- (8) " B. P. Nautiyal.

B. C. ROY
Director General
Geological Survey of India

MINISTRY OF INTERNATIONAL TRADE**Office of the Chief Controller of Imports and Exports**

(IMPORT AND EXPORT TRADE CONTROL)

New Delhi, the 17th March 1964

No. 6/396/56-Admn(G)/951—The Chief Controller of Imports and Exports hereby appoints Shri B. V. Sabnis, formerly Assistant Controller in the office of the Import and Export Trade Control Adviser to the Military Governor, Goa, as Assistant Controller in the office of the Joint Chief Controller of Imports and Exports, Goa, in an officiating capacity with effect from the forenoon of the 1st October 1963, until further orders.

K. RAJARAMAN
Dy. Chief Controller of Imports & Exports
for Chief Controller of Imports & Exports

DIRECTORATE GENERAL, ALL INDIA RADIO*New Delhi, the 17th March 1964*

No. 15/112/63-SIII—The Director General, All India Radio hereby appoints Shri Hemchandra Madhao Joshi as Assistant Engineer, AIR, Bhopal in an *ad hoc* capacity with effect from the 2nd March 1964, until further orders.

No. 15/237/62-SIII—Shri Babu Lal Bansal, *ad hoc* Assistant Engineer, High Power Transmitters, All India Radio, Kingsway, Delhi, relinquished charge of his post on the 22nd February 1964 (A.N.).

K. A. IYER
Deputy Director (Administration)
for Director General

MINISTRY OF HEALTH**Town & Country Planning Organisation***New Delhi, the 13th March 1964*

No. F. 2-12/62-TCPO—On acceptance of his resignation, Shri I. S. Madan relinquished charge of the post of Assistant Planner in this Organisation with effect from the afternoon of the 7th March, 1964.

GIAN PRAKASH
Chairman

DIRECTORATE GENERAL OF HEALTH SERVICES*New Delhi, the 11th March 1964*

No. 7-66/63-Adm.I—The Director General of Health Services hereby appoints Dr. Dattaram Narayan Naik as Dental Surgeon at the Medical College, Pondicherry with effect from the forenoon of the 17th December 1963.

V. S. TALWAR
Deputy Director (Administration)

New Delhi, the 13th March 1964

No. 1-59/63-Adm.I—Consequent on his resignation, Dr. C. S. Sarin, relinquished charge of the post of Assistant Surgeon, Grade I (Dental), Willingdon Hospital, New Delhi on the afternoon of the 29th February 1964.

2. Dr. C. S. Sarin is granted terminal leave for 22 days with effect from the 1st March 1964.

A. S. BAWA
Deputy Director (Administration)

New Delhi, the 13th March 1964

No. 1-5/64-CGHS. I.—The Director General of Health Services hereby appoints Dr. (Mrs.) K. L. Agarwal to the post of Lady Assistant Surgeon, Grade I, under the Central Government Health Scheme, in a temporary capacity with effect from the forenoon of the 20th February, 1964 till further orders.

K. C. GUPTA
Dy. Director (Administration)

New Delhi, the 20th March 1964

No. 15-9/63-CGHS.I—The Director General of Health Services hereby appoints Dr. J. Miranda to the post of Assistant Surgeon, Grade I, under the Central Govt. Health Scheme, Bombay, in a temporary capacity with effect from the forenoon of the 1st November, 1963 till further orders.

No. 15-9/63-CGHS.I—Consequent on the transfer of the dispensary and staff of the Airport Dispensary, Santa Cruz to the C.G.H. Scheme, Bombay, Dr. (Mrs.) S. Bhatnagar assumed charge of the post of Assistant Surgeon, Grade I under the C.G.H. Scheme, Bombay on the forenoon of the 1st November, 1963.

K. C. GUPTA
Deputy Director (Administration)
for Director General of Health Services

MINISTRY OF FOOD AND AGRICULTURE

(Department of Food)

Indian Institute of Sugarcane Research*Lucknow, the 20th March 1964*

No. F. 10-1/64-Est. 14471—Dr. Virendra Prasad Agnihotri, is appointed as Assistant Mycologist, Central Civil Services, Class II, at the Indian Institute of Sugarcane Research, Lucknow in an officiating capacity with effect from 28th January 1964 (forenoon).

R. R. PANJE
Director

INDIAN AGRICULTURAL RESEARCH INSTITUTE*New Delhi, the 17th March 1964*

No. Ad.1/17-447/63-Myc—The Director, Indian Agricultural Research Institute, New Delhi hereby appoints Shri K. S. Vashisth, Research Assistant in the Scheme for Coordinated Plant Virus Disease Scheme, Simla Centre, as Assistant Virus Entomologist in the PL. 480 Scheme for Intensification of Research on Citrus Die-Back Disease, Poona Centre, in a temporary capacity with effect from the afternoon of 25th February 1964, until further orders.

Shri D. G. Rao, officiating Assistant Virus Entomologist in the PL. 480 Scheme for Intensification of Research on Citrus Die-Back Disease, Poona Centre, is reverted to the post of Research Assistant in the Coordinated Plant Virus Disease Scheme, Poona Centre with effect from the afternoon of 25th February 1964.

The 21st March 1964

No. Ad.1/17-77/Pt.II/63-Myc.—The Director, Indian Agricultural Research Institute, New Delhi, hereby appoints Shri C. L. Sethi, Officiating Assistant Plant Pathologist in the Scheme for the establishment of a Section of Nematology (Mycological Portion), as Assistant Plant Pathologist in the Plant Introduction and Exploration Organisation (Mycological Portion), at Indian Agricultural Research Institute, New Delhi, in a temporary capacity with effect from the afternoon of 26th February, 1964 until further orders.

VAS DEV
Registrar
for Director

INDIAN VETERINARY RESEARCH INSTITUTE*Izatnagar, the 13th March 1964*

No. F.6-5/60-E.I.—Shri Suraj Bhan Singh is appointed as Estate Manager at the Indian Veterinary Research Institute, Mukteswar in a substantive capacity with effect from the 11th March 1961.

M. R. DHANDA
Director

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE*Mandapam Camp, the 19th March 1964*

No. 3-31/62-Adm.—Shri P. S. B. R. James, Research Assistant of this Department is appointed to the post of Assistant Research Officer at this Institute in an officiating capacity with effect from the afternoon of 7th March 1964 and until further orders. He took charge of the post at Mandapam Camp.

S. JONES
Director

MINISTRY OF EDUCATION**(Department of Science)****Botanical Survey of India***Calcutta-13, the 13th March 1964*

No. BSI-4/20/63-Adm.—Sri G. V. Subba Rao relinquished charge of his post as Botanist Class II, in the Central National Herbarium of the Botanical Survey of India, with effect from the afternoon of 22nd February 1964.

The 14th March 1964

No. BSI-4/4/63-Adm.—Dr. G. M. Oza relinquished charge of his post as Scientific Officer (Cl. II) in the Botanical Survey of India with effect from the afternoon of the 4th February 1964.

H. SANTAPAU
Director

ATOMIC ENERGY ESTABLISHMENT, TROMBAY*Bombay-5, the 18th March 1964*

PA/81(6-1)/64-R—The Chief Engineer, Architecture & Civil Engineering Division of the Atomic Energy Establishment, Trombay, appoints Shri Manamohan Hanamant Ranade, a permanent Draughtsman in the Central Railway and officiating Quantity Assistant in the Atomic Energy Establishment, Trombay, to officiate as Scientific Officer/Engineer-Grade SB in the same Division with effect from the forenoon of February 1, 1964, until further orders.

P. R. MER
Recruitment Officer

INDIA METEOROLOGICAL DEPARTMENT*New Delhi-3, the 21st March 1964*

No. E(1)00775—The Director General of Observatories hereby appoints Shri G. S. Sarwade as Assistant Meteorologist in the Indian Meteorological Service, Class II (Central Service, Class II) in a temporary capacity with effect from the forenoon of the 18th February 1964 and until further orders. Shri Sarwade has been posted to the Instruments Section, Poona, under the Deputy Director General of Observatories (Instruments), New Delhi.

C. RAMASWAMY
Deputy Director General of Observatories
(Administration)
for Director General of Observatories

COLLECTORATE OF CUSTOMS AND CENTRAL EXCISE*Panjim, the 7th March 1964*

No. 1/64—On his transfer from the former Directorate of Customs Services, Goa, Daman and Diu, Sri V. A. C. Albuquerque has been appointed as Principal Appraiser in this Collectorate with effect from 1st October 1963, until further orders.

No. 2/64—On their transfer from the former Directorate of Customs Services, Goa, Daman and Diu, Sarvashri M. S. Dubaxi and A. Martins have been appointed as Appraisers in this Collectorate with effect from 1st October 1963, until further orders.

No. 3/64—On their transfer from the former Directorate of Customs Services, Goa, Daman and Diu, Sarvashri A. D. Sirvoicar, Balacrishna Camotim, A. S. Lobo, A. H. A. Quadros, V. D. P. Loundo, J. A. de Goveia Pinto and Z. N. S. Q. Agxicar have been appointed to officiate as Appraisers in this Collectorate with effect from 1st October 1963, until further orders.

No. 4/64—Sarvashri M. S. Dubaxi and A. Martins, Appraisers have been appointed on promotion to officiate as Principal Appraisers with effect from 21st November 1963 (F.N.), and until further orders.

No. 5/64—Shri V. A. Albuquerque, Principal Appraiser of this Collectorate is granted leave for 27 days from 9th March 1964 with permission to prefix and suffix Sundays on 8th March 1964 and 5th April 1964 to the leave.

C. T. A. PILLAI
Collector of Customs & Central Excise
Goa

CENTRAL EXCISE DEPARTMENT**The Mysore Central Excise Collectorate***Bangalore, the 12th March 1964*

No. 1/64—Shri E. Damodara Menon, a permanent Deputy Superintendent of Central Excise, of the Collectorate of Customs and Central Excise, Cochin, has been promoted and appointed to officiate as Superintendent of Central Excise, Class II and posted to Nipani Town Circle of the Belgaum Division from the forenoon of the 6th January 1964.

N. MOOKHERJEE
Collector

OFFICE OF THE COLLECTORATE OF CUSTOMS*Bombay, the 16th March 1964*

No. 317—Shri K. C. Mirani, Permanent Senior Grade Preventive Officer (Grade I) has been promoted to officiate as Preventive Inspector w.e.f. 4-3-1964 (B.N.) and until further orders.

M. A. RANGASWAMY
Collector of Customs, Bombay

CENTRAL WATER AND POWER COMMISSION**(Water Wing)***New Delhi-11, the 17th March 1964*

No. 14/429/63-Adm.V—On the recommendations of the Union Public Service Commission, the Chairman, C.W. & P.C. hereby appoints Shri S. P. Shrivastava to officiate as Extra Assistant Director in the Central Water and Power Commission with effect from the forenoon of the 29th February 1964, until further orders. He took over charge of the above post with effect from the same date and time.

2. Shri Shrivastava will be on probation for a period of two years with effect from the 29th February 1964.

The 20th March 1964

No. 14/392/63-Adm.V—Consequent upon his resignation having been accepted by the Chairman, Central Water and Power Commission, Shri K. Seshadri relinquished charge of the Office of Extra Assistant Director in the Central Water and Power Commission with effect from afternoon of the 29th February, 1964.

P. S. VISVANATHAN
Administrative Officer
for Chairman, C.W. & P. Commission

New Delhi, the 20th March 1964

No. 14/451/64-Adm. V—Consequent upon his selection by the Union Public Service Commission, the Chairman, Central Water & Power Commission, hereby appoints Shri S. B. Kulkarni, Research Assistant, Central Water & Power Research Station to officiate as Assistant Research Officer (Engineering), on a regular basis in the Central Water & Power Research Station, with effect from the forenoon of the 12th February 1964. Shri Kulkarni took over the charge of the post with effect from the same date and time.

2. Shri Kulkarni will be on probation for a period of two years with effect from the 12th February, 1964.

P. S. VISVANATHAN

Administrative Officer,

Central Water and Power Commission

(Power Wing)

Simla-4, the 18th March 1964

No. 3/4/64-ADM.II—The Chairman, Central Water and Power Commission hereby appoints the following Technical Assistants, provisionally as Extra Assistant Directors in a temporary capacity with effect from the dates shown against their names, until further orders :

Name & Date from which appointed as Extra Asstt. Director

Shri P. N. Sharma—4-3-1964.

Shri Bal Krishan Divetia—4-3-1964.

Shri S. P. Kapur—5-3-1964.

Shri P. S. Krishnan—5-3-1964.

Shri S. K. Nirwani—10-3-1964.

SADHU SINGH

Section Officer
for Chairman

CENTRAL PUBLIC WORKS DEPARTMENT

Office of the Superintending Engineer, Food Storage Circle

Bombay-77, the 11th March 1964

No. 15/37/63-FSC(B)/874—Shri Anand Prakash, Assistant Engineer, Ahmedabad (Resigned) attached to Food Storage Division, Nasik was granted earned leave for 60 days with effect from 8th May 1963 to 6th July 1963 (A.N.).

Sd./- ILLEGIBLE

Superintending Engineer
Food Storage Circle

INDIAN POSTS AND TELEGRAPHS DEPARTMENT

Office of the Postmaster-General, Gujarat Circle

Ahmedabad-20, the 9th March 1964

No. S.22-2/II—Shri M. A. Pandya has assumed charge as Assistant Director Postal Services, Office of the Postmaster General, Ahmedabad with effect from 29th February 1964 (F.N.), in a new post sanctioned vide Director General of Posts and Telegraphs, New Delhi No. 32/23/63-PE, dated the 18th February 1964.

A. SWAMINATHAN

Postmaster General
Gujarat Circle

Office of the Director of Telecommunications, Jammu & Kashmir Circle

Srinagar, the 10th March 1964

No. Q-1724/19—Sanction of the Director, Telecommunications, J. & K. State, Srinagar is hereby conveyed to the grant of 31 days Earned Leave in favour of Shree O. P. Sharma, A.D.E.T. (Carrier), Udhampur with effect from 15th January 1964.

Sd./- ILLEGIBLE

Dy. Director, Telecommunications
J. & K. Circle, Srinagar

OFFICE OF THE COMMISSIONER OF INCOME-TAX

GIFT TAX

Bombay, the 5th February 1964

B. C. No. T-V461(21)/64—In pursuance of sub-section (5) of Section 226, and Section 229 of the Income-tax Act, 1961 (43 of 1961), Section 33 of the Gift-tax Act, 1958 (18 of 1958), and Section 19 of the Super Profits Tax Act, 1963 (14 of 1963), and of all other powers enabling him in this behalf and in supersession of all previous orders in so far as they relate to the subject, the Commissioner of Income-tax/Gift-tax, Bombay City III hereby authorises the Income-tax Officers/Gift-tax Officers subordinate to him to recover from an assessee the tax, interest, fine, penalty and any other sum payable under the provisions of the said Acts by the said assessee by distraint and sale of his movable property in the manner laid down in the Third Schedule to the said Income-tax Act, 1961.

INCOME-TAX ESTABLISHMENTS

The 9th March 1964

No. 735—Shri G. H. Keswani, was posted to perform the functions of Income-tax Officer, Com. Cir. III(9) Bombay, in addition to his own duties with effect from the afternoon of 7th February 1964 *vice* Shri Jadunathan Prasad, I.R.S. proceeded on leave.

No. 736—On return from leave, Shri Jadunath Prasad, I.R.S. is re-posted as Income-tax Officer, Com. Cir III(9), Bombay with effect from the forenoon of 27th February, 1964.

K. E. JOHNSON

Commissioner of Income-tax/Gift-tax
Bombay City III, Bombay

Bombay, the 9th March 1964

No. 737—On return from leave, Shri R. Desikan, is re-posted as 3rd Income-tax Officer, Bombay Refund Circle, Bombay with effect from the forenoon of 2nd March 1964.

R. N. JAIN

Commissioner of Income-tax,
Bombay City I, Bombay

MINISTRY OF RAILWAYS

Research, Designs & Standards Organisation

Simla-2, the 13th March 1964

No. A/EP-737—Consequent on return to duty on 14-2-64 of Shri S. Ramasubramanian from leave, Shri J. N. Ghosh is posted as Sectional Officer (CPDO) Research, Designs & Standards Organisation, Lucknow *vice* Shri D. N. V. Chellam, Sectional Officer (CPDO) proceeded on 51 days LAP from 14-2-64.

The 18th March 1964

No. E-II/RT/O—Shri P. Venkataraman, Stenographer, Research, Designs and Standards Organisation, Lucknow was temporarily promoted to officiate as Section Officer (Admin.) w.e.f. 30th December 1963 F.N.

2. Shri P. Venkataraman, officiating Section Officer (Admin.) R.D.S.O., Lucknow reverted as Stenographer w.e.f. 28th January 1964 F.N.

No. E-II/RT/O/I—Shri B. R. Sharma, Assistant was promoted to officiate as Section Officer (Admin.), R.D.S.O., Lucknow w.e.f. 28th January 1964 F.N.

No. E-II/RT/O/II—Shri Y. R. Nagar, Assistant was promoted to officiate as Section Officer, R.D.S.O., Chit-taranjan w.e.f. 1st February 1964 F.N.

The 19th March 1964

No. A/EP-740—Shri S. Seshadry, Offg. Sectional Officer (Loco), Research, Designs and Standards Organisation, Simla reverted as Senior Design Assistant with effect from 22nd February 1964 A.N.

R. E. de Sa
Director General

CENTRAL RAILWAY*Bombay, the 19th March 1964*

No. HPB/GAZ/60—Shri K. P. Bhende—Inspector of Works has been appointed to officiate as Assistant Engineer (Class II) from 20th October, 1963.

Shri G. P. Sharma—Permanent Way Inspector has been appointed to officiate as Assistant Engineer (Class II) from 1st November, 1963.

Shri J. F. R. Athaide—Permanent Way Inspector has been appointed to officiate as Assistant Engineer (Class II) from 7th November, 1963.

Shri V. R. Kankate—Permanent Way Inspector has been appointed to officiate as Assistant Engineer (Class II) from 28th November, 1963.

RATAN LALL
General Manager

EASTERN RAILWAY*Calcutta, the 10th March 1964*

No. G/OPTG/Station Supdt.—Sri S. M. Banerjee, Officiating Station Superintendent (Class II) Howrah, is confirmed in that appointment with effect from 19-12-61 against one of two Class II posts of Station Superintendents allotted to the cadre of Transportation (Traffic) & Commercial Department.

G. P. BHALLA
General Manager

NORTHEAST FRONTIER RAILWAY*Pandu, the 11th March 1964*

No. E/283/III/130(O)—Dr. N. R. Dutta, Assistant Surgeon (Class III) is appointed to officiate as Assistant Medical Officer (Class II) with effect from the forenoon of 4-2-64.

No. E/283/III/128(O)—Shri P. R. Jain, Officiating District Electrical Engineer (Sr. scale) is reverted to the Assistant Electrical Engineer with effect from the forenoon of 24-2-64.

B. C. GANGULI
General Manager

OFFICE OF THE REGISTRAR OF COMPANIES

In the matter of the Companies Act, 1956 and of Budh Yatayat Private Limited.

Patna, the 12th March 1964

No. 37(687) 6827—Notice is hereby given pursuant to sub-section (5) of section 560 of the Companies Act, 1956, that the name of Budh Yatayat Private Limited has this day been struck off the Register and the said company is dissolved.

R. P. KHANDPUR
Registrar of Companies
Bihar

In the matter of the Companies Act, 1956, and of Auto Parts Private Limited.

Jullundur, the 16th March 1964

No. TS/2282/3679—Notice is hereby given pursuant to sub-section (3) of section 560 of the Companies Act, 1956, that at the expiration of three months from the date hereof the name of the Auto Parts Private Limited, unless cause is shown to the contrary, will be struck off the Register and the said company will be dissolved.

In the matter of the Companies Act, 1956 and of Volga Dairies Private Limited.

Jullundur, the 17th March 1964

No. TS/1596/3727—Notice is hereby given pursuant to sub-section (5) of section 560 of the Companies Act, 1956, that the name of Volga Dairies Private Limited has this day been struck off the Register and the said company is dissolved.

S. KRISHNAMURTHY
Registrar of Companies
Punjab & Himachal Pradesh

In the matter of the Companies Act, 1956 and of Kalahandi Industrial & Commercial Corporation Limited.

Cuttack, the 16th March 1964

No. A. 163/64-5111-(11)—Notice is hereby given pursuant to sub-section (3) of section 560 of the Companies Act, 1956, that at the expiration of three months from the date hereof the name of the Kalahandi Industrial & Commercial Corporation Limited, unless cause is shown to the contrary, will be struck off the Register and the said company will be dissolved.

A. C. SARKAR
Registrar of Companies
Orissa

In the matter of the Companies Act, 1956 and of Raj Meters Limited Devtaji Kothi Station Road, Kotah.

Jaipur, the 17th March 1964

No. Stat/1123/2581—Notice is hereby given pursuant to sub-section (5) of section 560 of the Companies Act, 1956, that the name of Raj Meters Limited has this day been struck off the Register and the said company is dissolved.

S. NARAYANAN
Registrar of Companies
Rajasthan, Jaipur

In the matter of the Companies Act, 1956 and of Desi Karbar Company, Limited.

Kanpur, the 20th March 1964

No. 3895/60lc—Notice is hereby given pursuant to sub-section (5) of section 247 of the Indian Companies Act, 1913 that the name of Desi Karbar Co. Limited has this day been struck off the Register and the said company is dissolved.

K. M. BHONSLE
Registrar of Companies
Uttar Pradesh

In the matter of the Companies Act, 1956 and of 'Sri Srinivasa Private Limited'.

Madras-34, the 7th March 1964

No. DN/3991/63—Notice is hereby given pursuant to sub-section (5) of section 560 of the Companies Act, 1956 that the name of 'Sri Srinivasa Private Limited' has this day been struck off the register and the said company is dissolved.

K. RAJAGOPALAN
Assistant Registrar of Companies
Madras-34

UNION PUBLIC SERVICE COMMISSION

NOTICE

New Delhi, the 28th March 1964

No. F. 2/3/63-E.I.(B).—A competitive examination for recruitment to (1) the Indian Railway Service of Engineers, (2) the Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways, (3) the Signal Engineering Department of the Superior Revenue Establishment of Indian Railways, (4) the Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways, (5) the Central Engineering Services, Class I and Class II, (6) the Central Electrical Engineering Services, Class I and Class II, (7) the Indian Inspection Service, Class I (Engineering Branch), (8) the Indian Supply Service, Class I, (9) the Indian Ordnance Factories Service, Class I, (10) the Telegraph Engineering Service, Class I, and (11) the Central Engineering Service (Roads), Class I will be held by the Union Public Service Commission at AHMEDABAD, ALLAHABAD, BANGALORE, BHOPAL, BOMBAY, CALCUTTA, DELHI, HYDERABAD, JAIPUR, LONDON, MADRAS, PATIALA, PATNA, SHILLONG and TRIVANDRUM commencing on 17th September, 1964 under the rules published by the Ministry of Railways (Railway Board) in their Notifications No. E(GR)62 RR 2, No. E(GR)62 RR 6, No. E(GR)62 RR 4, and No. E(GR)62 RR 7, dated 28th April, 1962; by the Ministry of Works, Housing and Supply in their Notifications No. 15(4)/60-EWI(I) and No. 15(4)/60-EWI(II), dated 10th February, 1961 and No. 15(5)/58-EWI(III) and No. 15(4)/60-EWI(III), dated 31st December, 1958 and 10th February, 1961 respectively; by the Ministry of Economic and Defence Co-ordination (Department of Supply) in their Notification No. 49/9/61-ESI, dated 14th January, 1963, and No. 35/9/61 ESI, dated 20th March, 1963; by the Ministry of Defence in their Notification No. 783-A, dated 16th April, 1962; by the Ministry of Transport and Communications (Department of Communications) in their Notification No. 5/4/59-STA, dated 4th January, 1960; and by the Ministry of Transport & Communications (Department of Transport) (Roads Wing) in their Notification No. A-I(39)/60, dated 20th December, 1960 as amended from time to time. The Notifications of the Ministry of Railways have been published in the Gazette of India dated the 28th April, 1962, the Notifications of the Ministry of Works, Housing & Supply dated 10th February, 1961 and dated 31st December, 1958 have been published in the Gazette of India dated the 25th February, 1961 and 10th January, 1959 respectively, and the Notifications of the Ministry of Economic and Defence Co-ordination (Department of Supply) dated 14th January, 1963 and dated 20th March, 1963 have been published in the Gazette of India dated 26th January, 1963 and 30th March, 1963 respectively. The Notification of the Ministry of Defence dated 16th April, 1962 has been published in the Gazette of India, dated the 21st April, 1962. The Notification of the Ministry of Transport and Communications (Department of Communications) dated 4th January, 1960 has been published in the Gazette of India dated the 16th January, 1960. The Notification of the Ministry of Transport & Communications (Department of Transport) (Roads Wing) dated 20th December 1960, has been published in the Gazette of India dated 31st December, 1960.

Candidates accepted for admission to the examination will be informed at what place, at what time and on what dates they should present themselves.

The centres are liable to be changed at the discretion of the Commission.

Candidates who qualify for the Indian Railway Service of Engineers or the Signal Engineering Department or the Electrical Engineering Department or the Mechanical Engineering and Transportation (Power) Department may also be appointed to the Stores Department of the Superior Revenue Establishment of Indian Railways.

Candidates having degree in Mechanical Engineering or equivalent qualification (*vide* paragraph 6 of the Compendium of rules), who qualify on the results of this examination may also be considered for appointment to posts of Assistant Drilling Engineer (Class I) in the Geological Survey of India, under the Ministry of Steel, Mines and Heavy Engineering (Department of Mines and Metals). (*See Annexure III*).

On the results of the examination recruitment will also be made to posts of Assistant Director/Assistant Executive Engineer/Research Officer in the Central Water

and Power Commission (Water Wing), Engineering Service Class I and Central Water and Power Commission (Power Wing), Engineering Service, Class I, under the Ministry of Irrigation and Power. Candidates who qualify on the basis of the schemes of the examination prescribed in respect of Indian Railway Service of Engineers or Central Engineering Service, Class I/Electrical Engineering Department/Mechanical Engineering and Transportation (Power) Department will be eligible for appointment to the three categories of posts, Civil or Electrical or Mechanical, as the case may be, in the two services. (*See Annexure III*).

Candidates who qualify in the Examination may also be considered for other permanent/temporary posts under the Central Government (*vide* para. 9 of Annexure III) requiring similar educational qualifications.

2. The approximate number of vacancies in the various services/posts for which recruitment is to be made on the basis of this examination is given below :—

(i) The Indian Railway service of Engineers ...	13
(ii) The Electrical Engineering Department ...	5
(iii) The Signal Engineering Department ...	6
(iv) The Mechanical Engineering and Transportation (Power) Department ...	3
(v) The Stores Department ...	4
(vi) The Central Engineering Service, Class I ...	
(vii) The Central Engineering Service, Class II ...	
(viii) The Central Electrical Engineering Service, Class I ...	
(ix) The Central Electrical Engineering Service, Class II ...	
(x) The Indian Inspection Service, Class I, (Engineering Branch) ...	10
(xi) The Indian Supply Service, Class I ...	19
(xii) The Indian Ordnance Factories Service, Class I ...	25
(xiii) The Telegraph Engineering Service, Class I ...	50
(xiv) The Central Engineering Service (Roads), Class I ...	
(xv) The post of Assistant Drilling Engineer, Class I in the Geological Survey of India. ...	7
(xvi) The post of Assistant Director/Assistant Executive Engineer/Research Officer in the Central Water and Power Commission ...	95

The vacancies shown against the Services at items (i), (ii), (iii), (iv), (v) and (xii) above are permanent.

All the 10 vacancies in the Indian Inspection Service, Class I are temporary. Of these vacancies 2 will be filled on the basis of Plan 1, 6 on the basis of Plan 2 and the remaining 2 on the basis of Plan 3 (*See* item I of Appendix II).

All the 19 vacancies in the Indian Supply Service, Class I are temporary. Of these vacancies 11 vacancies will be filled on the basis of Plan 1 and 8 on the basis of Plan 2 (*See* item J of Appendix II).

The vacancies in the Telegraph Engineering Service, Class I, are initially temporary but are likely to be retained on permanent basis.

The vacancies in the post of Assistant Drilling Engineer are temporary.

The break-up and nature of the vacancies in the posts of Assistant Director/Assistant Executive Engineer/Research Officer (Civil, Electrical and Mechanical) in the Central Water and Power Commission are as follows :—

- (a) Civil.....44 vacancies—4 permanent and 40 temporary
- (b) Electrical.....40 temporary vacancies
- (c) Mechanical.....11 vacancies—1 permanent and 10 temporary

The number and nature (whether permanent or temporary) of the vacancies in the Services against which no information has been given above, will be announced later.

The above numbers are liable to alteration.

Appointments to these vacancies will be made with due regard to the orders regarding special representation for Scheduled Castes and Scheduled Tribes candidates.

Scheduled Castes/Tribes mean any of the Castes/Tribes mentioned in the Scheduled Castes/Tribes Lists (Modification) Order, 1956, read with the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1956, the Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956, the Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959, the Constitution (Dadra and Nagar Haveli) Scheduled Castes Order, 1962, and the Constitution (Dadra and Nagar Haveli) Scheduled Tribes Order, 1962.

3. The examination will be a combined one for the purpose of filling vacancies in the Services and Departments mentioned above. A candidate may apply to be admitted to one or more of these Services. Only one application need be sent in and it should be stated therein whether a candidate wishes to enter for one or more Services or Departments. He will be required to pay the fees mentioned in the Compendium of the Rules mentioned in paragraph 4 below once only and will not be required to pay separate fees for each Service or Department for which he applies. The Government of India may assign a successful candidate to any Service for which he is competing on a consideration of all the circumstances including any personal preference expressed by the candidate.

Para 5 of the Compendium of the Rules for this examination specifies the number of examinations that certain categories of candidates are eligible to take. Since this is a combined examination, a candidate who takes the examination once, whether for one or more Services, will be considered to have taken one examination for all the services mentioned in para. 1 above for which he is eligible.

N.B.—In their application forms, candidates are required to specify clearly the Service(s)/Department(s), out of those mentioned above, for which they wish to be considered, in the order of preference. They may include in the order of preference, the category/categories of other Permanent/Temporary posts (*vide* last sub-para of para 1 above) if they wish to be considered for appointment to those posts.

4. Applications with connected papers should be submitted in accordance with the Instructions to Candidates contained in Annexure I and should reach the Union Public Service Commission on or before 25th May, 1964.

Applications from candidates residing abroad and those residing in Andaman and Nicobar Islands will, however, be accepted up to 8th June, 1964 as a special case. (This is applicable to persons actually residing abroad or in Andaman and Nicobar Islands at the time of submitting their applications).

Copies of the application form and other connected papers may be obtained direct from the Secretary, Union Public Service Commission, Dholpur House, D.H.Q.P.O., New Delhi-11 on payment of Re. 1.00 nP. which should be remitted to the Commission by money order stating the name of this examination. Candidates will not be supplied with copies of the complete rules, but only with a Compendium of the Rules which will contain essential conditions of eligibility.

THE REMAINING FEE (See APPENDIX III OF THE COMPENDIUM OF THE RULES) SHOULD BE PAID EITHER BY TREASURY RECEIPT OR BY INDIAN POSTAL ORDERS WITH THE APPLICATION. EACH POSTAL ORDER SHOULD INVARIABLY BE CROSSED AS SHOWN BELOW.



AND COMPLETED AS FOLLOWS :

"PAY TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION AT NEW DELHI POST OFFICE."

L322G1/63—2

CANDIDATES MUST NOTE THAT IT IS NOT SAFE TO SEND POSTAL ORDERS WHICH ARE NEITHER CROSSED NOR MADE PAYABLE TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION AT NEW DELHI POST OFFICE. FULL PARTICULARS OF THE TREASURY RECEIPT OR POSTAL ORDERS, AS THE CASE MAY BE, SHOULD BE ENTERED AGAINST COLUMN 29(a) OF THE APPLICATION FORM.

5. No allegation that an application form or a letter in respect of such a form has been lost or delayed in post will be considered, unless the person making such an allegation produces post office registration receipt. Candidates who send their applications or requests for application forms at a late date will do so at their own risk.

6. If any candidate who took the Engineering Services Examination held in September, 1963 wishes to apply for admission to this examination, he must submit his application by the prescribed date without waiting for the results or an offer of appointment. If he is appointed on the results of the 1963 examination, his candidature for this examination will be cancelled on request and the fee refunded to him in full.

7. All communications in respect of an application, should be addressed to the Secretary, Union Public Service Commission, Dholpur House, D.H.Q.P.O., New Delhi-11 and should contain the following particulars :—

NAME OF EXAMINATION

MONTH AND YEAR OF EXAMINATION

ROLL NUMBER (IF COMMUNICATED TO THE CANDIDATE)

NAME OF CANDIDATE

ADDRESS AS GIVEN IN APPLICATION

Communications not giving these particulars may not be attended to. In all correspondence with the Union Public Service Commission concerning this examination, candidates should invariably superscribe their envelopes and correspondence with the words "ENGINEERING SERVICES EXAMINATION 1964".

HARISH CHANDRA

Dy. Secretary.

ANNEXURE I

INSTRUCTIONS TO CANDIDATES REGARDING FILLING AND SUBMISSION OF APPLICATIONS

1. A copy each of the Notice, the Compendium of the Rules, the Application Form and other papers relating to the examination is obtainable from the office of the Union Public Service Commission in accordance with para. 4 of the Notice. *Candidates should consult them carefully to see if they are eligible before filling in the application form or paying the prescribed fee. The conditions prescribed cannot be relaxed.*

BEFORE SUBMITTING THE APPLICATION CANDIDATES MUST SELECT FINALLY FROM AMONG THE CENTRES GIVEN IN PARAGRAPH 1 OF THE NOTICE, THE PLACE AT WHICH THEY WISH TO APPEAR FOR THE EXAMINATION. ORDINARILY NO REQUEST FOR A CHANGE IN THE PLACE SELECTED WILL BE ENTERTAINED.

2. The application form must be filled in in the candidate's own handwriting and all answers should be given in words. It should be submitted direct to the Secretary, Union Public Service Commission, Dholpur House, D.H.Q.P.O., New Delhi-11.

A candidate already in Government Service, whether in a permanent or temporary capacity, must submit his application through the Head of his Department or Office concerned who will complete the endorsement at the end of the application form and forward it to the Commission.

Applications from all other candidates, whether in private employment or in Government own industrial undertakings or other similar organisations, can be entertained direct. If such a candidate forwards his application through his employer and it reaches the Union Public Service Commission late, the application, even if submitted to the employer before the closing date, will not be entertained.

No application received by the Commission after the date prescribed in the Notice will be accepted.

3. Candidates are warned that they should not furnish any particulars that are false or suppress any material information in filling in the application form.

4. A candidate must send the following documents with his application :—

- (i) A Treasury Receipt or CROSSED Indian Postal Orders payable to the Secretary, Union Public Service Commission at New Delhi Post Office for the prescribed fee.
- (ii) A CERTIFICATE OF AGE.
- (iii) A CERTIFICATE OF CHARACTER.
- (iv) A CERTIFICATE OF EDUCATIONAL QUALIFICATION.
- (v) TWO COPIES OF RECENT PASSPORT SIZE (2"×2½" approx.) PHOTOGRAPH OF THE CANDIDATE.
- (vi) IN THE CASE OF CANDIDATES OFFERING SURVEYING AS AN OPTIONAL OR COMPULSORY SUBJECT, A CERTIFICATE IN ORIGINAL WITH A COPY THEREOF, SHOWING THAT THE CANDIDATE HAS UNDERGONE SATISFACTORY TRAINING IN SURVEYING INCLUDING PRACTICAL SURVEYING (SEE SYLLABUS).

Details of the documents mentioned in items (i), (ii), (iii), (iv) and (v) are given below :—

(i) *A Treasury Receipt or Crossed Indian Postal Orders for the prescribed fee.*—The amount may be deposited in the nearest Government Treasury, or in a branch of the State Bank of India, or in a State Treasury authorised to transact business on behalf of Government (Amount deposited at Bombay, Calcutta, Delhi or Madras should be deposited in the Reserve Bank of India instead of in the State Bank of India). The Treasury or Bank should be asked to credit it to the account head "XXI—Miscellaneous Department Examination fees. Receipts of the Union Public Service Commission." The name of the examination and of the treasury at which the fee is deposited should be clearly entered in the treasury receipt. The treasury receipt should be on the form pertaining to Central Government transactions and should be obtained from the treasury at which the fee is deposited. If, however, the blue form is not available in the treasury the ordinary form hitherto employed should be used.

All Postal Orders should bear the signature of the issuing Post Master and a clear stamp of the issuing Post Office. All Postal Orders should be CROSSED and filled in as follows :—

"Pay to the Secretary, Union Public Service Commission, at New Delhi Post Office."

In no case will Postal Orders payable at any other Post Office be accepted. Defaced or mutilated Postal Orders will also not be accepted.

NOTE 1.—Candidates residing abroad at the time of submitting their applications should deposit the amount of the prescribed fee (the equivalent fee of Rs. 82.50 nP. Rs. 20.62 nP. in the case of candidates belonging to the Scheduled Castes and Scheduled Tribes) in the office of India's High Commissioner, Ambassador or Representative, as the case may be, in that country and forward the receipt from the office with the application.

NOTE 2.—AN APPLICATION NOT ACCOMPANIED BY A TREASURY RECEIPT OR CROSSED INDIAN POSTAL ORDERS FOR THE PRESCRIBED FEE WILL BE SUMMARILY REJECTED.

NOTE 3.—A candidate must send the Treasury Receipt, in original, along with his application. Duplicate/triplicate copies of the Treasury Receipt will not be accepted.

(ii) *A Certificate of age.*—The date of birth ordinarily accepted by the Commission is that entered in the Matriculation Certificate or in the Secondary School Leaving Certificate (or in a certificate recognised by an Indian University as equivalent to Matriculation) or in an extract from a Register of Matriculates maintained by a University, which extract must be certified by the proper authority of the University. The expression "Matriculation Certificate" in this part of the instructions must be understood as including these alternative certificates.

Candidates will thus understand that the Matriculation Certificate is required in all cases as evidence of age, and

it must invariably be sent to the Commission in original with a copy thereof, together with the application.

Sometimes the Matriculation or equivalent Certificate does not show the date of birth, or only shows the age by completed years or completed years and months. In such cases a candidate must send, in addition to the Matriculation or equivalent certificate, an original certificate, together with a copy thereof, from the Headmaster/Principal of the institution from where he passed the Matriculation or equivalent examination, showing the date of his birth or his exact age as recorded in the Admission Register of the Institution.

Candidates are warned that unless complete proof of age as laid down in these instructions is sent with an application, the application may be rejected. Further, they are warned that if the date of birth stated in the application is inconsistent with the age shown in the Matriculation Certificate and no explanation is offered, the application may be rejected.

NOTE 1.—A candidate who holds a completed Secondary School Leaving Certificate need submit with the original a copy of the page containing entries relating to age only.

NOTE 2.—CANDIDATES SHOULD NOTE THAT ONCE A DATE OF BIRTH HAS BEEN CLAIMED AND ACCEPTED BY THE COMMISSION FOR THE PURPOSE OF ADMISSION TO AN EXAMINATION, NO CHANGE WILL ORDINARILY BE ALLOWED AT A SUBSEQUENT EXAMINATION.

NOTE 3.—Displaced persons, who have lost their original Matriculation Certificate in Pakistan should obtain duplicate certificate from the University concerned. If they are unable to obtain the duplicate Matriculation Certificate from the University, they should submit an extract from the University Gazette in which their results were published showing their date of birth and certified by the Registrar or the Headmaster.

(iii) *A Certificate of character.*—A candidate must submit a certificate of character, in original, together with a copy thereof, from some person in authority (e.g. Principal, Proctor, Dean, etc.) at an educational institution which he is attending or has attended for at least one year during the three years immediately preceding the date of his application.

The signatory of the certificate should give his designation in full.

NOTE 1.—Candidates who have not attended any educational institution for at least one academic year within three years immediately preceding the date of their applications may submit a certificate of character, in original, with a copy thereof, from a Gazetted Officer in service.

NOTE 2.—Only one certificate of character is required.

(iv) *A Certificate of Educational Qualification.*—A candidate must submit a certificate or diploma, in original, with a copy thereof, showing that he has one of the qualifications prescribed in the Rules. The certificate submitted must be one issued by the authority (i.e. University or other examining body) awarding the particular qualification. If such a certificate or diploma is not submitted, the candidate must explain its absence, and submit such other evidence in original as he can to support his claim to the requisite qualifications. The Commission will consider this evidence on its merits but do not bind themselves to accept it as sufficient.

NOTE.—A Candidate who has appeared at an examination the passing of which would render him eligible to appear at this examination, but has not been informed of the result, may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply, provided that the qualifying examination is completed before the commencement of this examination. Such a candidate will be admitted to the examination if otherwise eligible, but the admission would be deemed to be provisional and subject to cancellation if he does not produce proof of having passed the examination, as soon as possible, and in any case not later than two months after the commencement of this examination.

(v) *Photographs.*—Candidates must submit two passport size (2"×2½" approx.) copies of their recent photograph one of which should be pasted on the first page of the application form and the other copy should be firmly attached to the application form. Each copy of the photograph should be signed in ink on the front by the candidate.

N.B.—Candidates are warned that if an application is incompletely or wrongly filled in or is not accompanied by any one of the documents mentioned under 4(ii), 4(iii), 4(iv), 4(v) and 4(vi) above without a reasonable explanation for its absence having been given, the application is liable to be rejected and no appeal against its rejection will be entertained. The documents not submitted with the application should be sent soon after the submission of the application, and in any case they must reach the Commission's office except as provided for in Note under paragraph 4(iv) above, within one month after the last date for receipt of applications. Otherwise, the application is liable to be rejected.

Candidates are warned that they should in no case correct or alter or otherwise tamper with an entry in the documents submitted by them nor should they submit a tampered document. If there is any inaccuracy or any discrepancy between two or more such documents an explanation regarding the discrepancy may be submitted separately.

5. A candidate who claims to belong to one of the Scheduled Castes or Scheduled Tribes should submit in support of his claim a certificate, in original, in the form given below from the District Officer or the Sub-Divisional Officer or any other Officer of the district in which his parents (or surviving parent) ordinarily reside, who has been designated by the State Government concerned as competent to issue such certificate, if both his parents are dead, of the district in which he himself ordinarily resides otherwise than for the purpose of his own education.

A candidate from the Delhi State may submit such a certificate also from the Additional District Magistrate or the 1st Class Stipendiary Magistrate or the Revenue Assistant.

The form of the certificate to be produced by Scheduled Castes and Scheduled Tribes candidates applying for appointment to posts under the Government of India.

Shri*

This is to certify that Shrimati-----

Kumari

son* of-----of-----village*-----

daughter of-----town-----

District*-----State*-----

in-----of the-----of-----

Division-----Union Territory-----

belongs to the-----Caste*-----which is

Tribe

recognised as a-----Scheduled Caste*-----under

Scheduled Tribe

the Scheduled Castes and Scheduled Tribes Lists (Modification) Order, 1956*

the Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956*

the Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959*

the Constitution (Dadra and Nagar Haveli) Scheduled Castes Order, 1962*

the Constitution (Dadra and Nagar Haveli) Scheduled Tribes Order, 1962*

Shri*-----and*-----his*-----

2. Shrimati-----or-----her-----family ordinarily

Kumari

reside(s) in-----village*-----District*-----

town-----Division-----

State*-----of-----

Union Territory-----

Signature-----

**Designation-----

(with seal of office)

Place-----State*-----

Date-----Union Territory-----

*Please delete the words which are not applicable.

NOTE.—The term "ordinarily reside(s)" used here will have the same meaning as in Section 20 of the Representation of the Peoples Act, 1950.

**Officers competent to issue Caste/Tribe certificates.

1. District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/Deputy Collector/1st Class Stipendiary Magistrate/**Sub-Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner.

** (Not below the rank of 1st Class Stipendiary Magistrate).

2. Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.

3. Revenue Officers not below the rank of Tehsildar.

4. Sub-Divisional Officer of the area where the candidate and/or his family normally resides.

5. Administrator/Secretary to Administrator/Development Officer (Laccadive, Minicoy and Amindivi Islands).

6. (a) A candidate from the former French Settlements which have now become part of India, claiming age concession under paragraph 5(e)(ii) of the Compendium of the Rules should produce, in original, a certificate from the Principal of the College he has graduated/will graduate from to show that he has been receiving education through the medium of French.

(b) A candidate from the Andaman and Nicobar Islands claiming age concession under paragraph 5(e)(iii) of the Compendium of the Rules should produce a certificate, in original, together with a copy thereof, from one of the following authorities in support of his claim.—

- (i) Chief Commissioner
- (ii) Deputy Commissioner
- (iii) Additional Deputy Commissioner
- (iv) Additional District Magistrate
- (v) Any one of the Assistant Commissioners.

(c) A candidate claiming age concession as a repatriate from Ceylon under paragraph 5(e)(iv) of the Compendium of the Rules should produce, in original, a certificate from the High Commission for India in Ceylon stating that he is an Indian Citizen who has come to India under the Repatriation Scheme of the Government of Ceylon.

(d) A candidate from the former Portuguese Territories of Goa, Daman and Diu in India claiming age concession under paragraph 5(e)(v) of the Compendium of the Rules should produce a certificate, in original, together with a copy thereof, from one of the following authorities in support of his claim :—

- (i) Director of Civil Administration.
- (ii) Administrators of the Concelhos.

7. (a) A person in whose case a certificate of eligibility is required should apply to the Government of India, Ministry of Railways/Works, Housing and Rehabilitation/Defence/Transport/Department of Supply/Department of Posts and Telegraphs, for issue of the required certificate of eligibility in his favour.

(b) If a certificate of eligibility is not necessary in the case of a person, he should produce an affidavit sworn before a first class Magistrate in one of the following forms, whichever may be applicable to him :—

1. "I declare that I migrated to India from areas which now form Pakistan before the nineteenth day of July, 1948, and have ordinarily been resident in India since then."
2. "I declare that I migrated to India from areas which now form Pakistan on or after the nineteenth day of July, 1948, and have ordinarily been resident in India since then, and I further declared that I have got myself registered as a citizen of India under Article 6 of the Constitution."
3. "I declare that I entered the Union Services without a certificate of eligibility before the commencement of the Constitution i.e., 26th January, 1950, and am continuing in such service since then without a break."

NOTE.—A candidate whose case is covered by item 2 above may submit the certificate of Registration as citizen of India, in original, alongwith a copy thereof, in lieu of an Affidavit sworn before a first class Magistrate as required under sub-para (b) above.

8. THE CERTIFICATES MENTIONED IN PARAGRAPHS 4(ii), 4(iii), 4(iv), 4(vi), 5, 6 and 7(b) ABOVE SHOULD INVARIABLY BE SENT IN ORIGINAL. THE COMMISSION DO NOT ACCEPT ONLY COPIES OF THESE CERTIFICATES, WHETHER ATTESTED OR OTHERWISE.

The originals of the certificates forwarded in accordance with paragraphs 4(ii), 4(iii), 4(iv), 4(vi), 5, 6 and 7(b) above will be returned when the result of the application is communicated. CANDIDATES ARE ADVISED TO KEEP ATTESTED COPIES OF THEIR CERTIFICATES BEFORE SUBMITTING THEM TO THE COMMISSION. THE COMMISSION CANNOT RETURN THE CERTIFICATE EARLIER THAN THE DATE OF COMMUNICATION OF THE RESULT OF THE APPLICATION FOR WHATEVER PURPOSE THEY MAY BE REQUIRED, NOR CAN THEY SUPPLY ATTESTED COPIES.

If a candidate has already submitted the certificates required in paragraphs 4(ii), 4(iii), 4(iv), 4(vi), 5, 6 and 7(b) above in connection with another examination conducted by the Union Public Service Commission and if they have not yet been returned to him, he should mention the fact when submitting his application, and if possible enclose a copy of each certificate. If the certificates are not with the Commission, they should be sent with the application, irrespective of whether the candidate appeared at a previous examination conducted by the Commission or not. If a certificate cannot be submitted with the application a reasonable explanation for its absence must be given with the application.

9. The fact that an application form has been supplied on a certain date, will not be accepted as an excuse for the late submission of an application. The supply of an application form does not *ipso facto* make the receiver eligible for admission to the examination.

10. If a candidate does not receive an acknowledgement of his application within a fortnight from the last date of receipt of applications for the Examination, he should at once contact the Commission for the acknowledgement.

11. Every candidate for admission to this Examination will be informed, at the earliest possible date, of the result of his application. It is not, however, possible to say when the result will be communicated. But if a candidate does not receive from the Union Public Service Commission a communication regarding the result of his application one month before the commencement of the Examination, he should at once contact the Commission for the result. Failure to comply with this provision will deprive the candidate of any claim to consideration.

All returnable certificates or papers will be returned when the result of his application is communicated.

12. No candidate shall be admitted to the Examination, unless he holds a certificate of admission from the Commission.

13. Candidates must pay the fees prescribed in Appendix III of the Compendium of the Rules. No claim for a refund of the fees will be entertained except to the extent stated in that Appendix nor can the fees be held in reserve for any other examination or selection.

14. All candidates who are declared qualified for the Personality Test will be physically examined at the place where they are summoned for interview, either immediately before or after the interview. Candidates will have to pay a fee of Rs. 16.00 nP. to the Medical Board. The fact that a candidate has been physically examined will not mean or imply that he will be considered for appointment. Candidates are advised to consult a Government Medical Officer of the standing of a Civil Surgeon as to their physical fitness before entering for the Examination. Particulars of the nature of the medical test to which candidates will be subjected before appointment and of the standards required are given in Appendix IV of the documents which will be supplied to candidates, *vide* sub-para. 2 of para. 4 of the Notice. These regulations are published for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard but they are not intended to restrict the discretion of Medical Examiners in any way.

15. Copies of pamphlets containing rules and question papers of the examinations held in previous years are on sale with the Manager of Publications, Civil Lines, Delhi-6, and may be obtained from him direct by mail orders only. These can also be obtained against cash payment

from (i) the Kitab Mahal, Theatre Communication Building, Connaught Place, New Delhi and (ii) the Government of India Book Depot, 8-Hastings Street, Calcutta. The pamphlets are also obtainable from the agents for the Government of India publication at various mofussil towns.

16. Communications regarding applications—ALL COMMUNICATIONS IN RESPECT OF AN APPLICATION SHOULD BE ADDRESSED TO THE SECRETARY, UNION PUBLIC SERVICE COMMISSION, DHOLPUR HOUSE, D.H.Q. P.O., NEW DELHI—11 AND SHOULD INVARIABLY CONTAIN THE FOLLOWING PARTICULARS :—

1. NAME OF EXAMINATION.
2. MONTH AND YEAR OF EXAMINATION.
3. ROLL NUMBER, (if communicated to the candidate).
4. NAME OF THE CANDIDATE (IN BLOCK CAPITALS).
5. ADDRESS AS GIVEN IN THE APPLICATION.

N.B.—COMMUNICATIONS NOT GIVING THE ABOVE PARTICULARS MAY NOT BE ATTENDED TO.

17. Change in address.—A CANDIDATE MUST SEE THAT COMMUNICATIONS SENT TO HIM AT THE ADDRESS STATED IN HIS APPLICATION ARE REDIRECTED, IF NECESSARY. CHANGE IN ADDRESS SHOULD BE COMMUNICATED TO THE COMMISSION AT THE EARLIEST OPPORTUNITY GIVING THE PARTICULARS MENTIONED IN PARAGRAPH 16 ABOVE. ALTHOUGH THE COMMISSION MAKE EVERY EFFORT TO TAKE ACCOUNT OF SUCH CHANGES THEY CANNOT ACCEPT ANY RESPONSIBILITY IN THE MATTER.

ANNEXURE II COMPENDIUM OF RULES

1. The examination will be held for recruitment to vacancies in the following Services.—

- (i) Indian Railway Service of Engineers;
- (ii) Electrical Engineering Department of the Superior Revenue Establishment of Indian Railways;
- (iii) Signal Engineering Department of the Superior Revenue Establishment of Indian Railways;
- (iv) Mechanical Engineering & Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways;
- (v) Central Engineering Service Class I;
- (vi) Central Engineering Service, Class II;
- (vii) Central Electrical Engineering Service, Class I;
- (viii) Central Electrical Engineering Service, Class II;
- (ix) Indian Inspection Service, Class I, (Engineering Branch);
- (x) Indian Supply Service, Class I;
- (xi) Indian Ordnance Factories Service, Class I;
- (xii) Telegraph Engineering Service, Class I; and
- (xiii) Central Engineering Service (Roads), Class I.

2. A candidate must apply to be admitted to the examination before such date, in such manner and in such form as the Commission may prescribe.

3. A candidate must be either—

- (a) a citizen of India, or
- (b) a subject of Sikkim, or
- (c) a subject of Nepal, or
- (d) a subject of Bhutan, or
- (e) a Tibetan refugee who came over to India, before the 1st January, 1962, with the intention of permanently settling in India, or
- (f) a person of Indian origin who has migrated from Pakistan with the intention of permanently settling in India;

Provided that a candidate belonging to categories (c), (d), (e) and (f) above shall be a person in whose favour a certificate of eligibility has been granted by the Government of India, and if he belongs to category (f) the certificate of eligibility, will be valid only for a period of one year from the date of his appointment beyond which such a candidate will be retained in service subject to his having acquired Indian citizenship;

Certificate of eligibility will not, however, be necessary in the case of candidates belonging to any one of the following categories :—

- (i) Persons who migrated to India from Pakistan before the nineteenth day of July, 1948, and have ordinarily been residing in India since then.
- (ii) Persons who migrated to India from Pakistan on or after the nineteenth day of July 1948 and have got themselves registered as citizens of India under Article 6 of the Constitution.
- (iii) Non-citizens in category (f) above who entered service under the Government of India before the commencement of the Constitution, viz., 26th January 1950, and who have continued in such service since then without a break. Any such person who re-entered or may re-enter such service with break after the 26th January 1950, will, however, require certificate of eligibility in the usual way.

A candidate in whose case a certificate of eligibility is necessary may be admitted to the examination and he may also provisionally be appointed subject to the necessary certificate being granted in his favour by the Government.

4. (a) No male candidate who has more than one wife living or who, having a spouse living, marries in any case in which such marriage is void by reason of its taking place during the life-time of such spouse, shall be eligible for appointment to any of the Services, appointments to which are made on the results of this competitive examination, unless the Government of India, after being satisfied that there are special grounds for doing so, exempt any male candidate from the operation of this rule.

(b) No female candidate whose marriage is void by reason of the husband having a wife living at the time of such marriage or who has married a person who has a wife living at the time of such marriage shall be eligible for appointment to any of the Services, appointments to which are made on the results of this competitive examination, unless the Government of India, after being satisfied that there are special grounds for doing so, exempt any female candidate from the operation of this rule.

5. (a) (i) A candidate for the Electrical Engineering and Signal Engineering Departments of the Superior Revenue Establishment of Indian Railways must have attained the age of 21 and must not have attained the age of 25 on the 1st August 1964, i.e. he must have been born not earlier than the 2nd August 1939 and not later than the 1st August 1943.

(ii) A candidate for all the remaining services mentioned in paragraph 1 above must have attained the age of 20 and must not have attained the age of 25 on the 1st August 1964, i.e., he must have been born not earlier than the 2nd August 1939 and not later than the 1st August 1944.

(b) The upper age-limit of 25 years will be further relaxable up to 30 years in respect of candidates for Services other than the Telegraph Engineering Service, Class I, Indian Ordnance Factories Service, Class I and the Central Engineering Service (Roads), Class I who are employed in a Department/Office or under the control of any of the authorities mentioned in column 1 below and apply for admission to the examination for the corresponding Service mentioned in column 2, if they hold substantively permanent posts in the particular department/office or have been continuously in temporary service in the particular department/office for at least three years on the 1st August 1964 or who were within the above specified age-limits on the date of their employment in the department/office etc., such relaxation being limited to only three examinations.

Railway Department	{ I.R.S.E. E.E.D. S.E.D. M.E.&T.P. Department.
Central Public Works Department.	{ C.E.S., Class I C.E.S., Class II C.E.E.S., Class I C.E.E.S., Class II
Directorate General of Supplies and Disposals.	{ Indian Inspection Service, Class I, Indian Supply Service, Class I.

A temporary Assistant Engineer recruited through the Commission to the Civil, Electrical, Signal and Mechanical and Transportation (Power) Departments of Indian Railways will also be eligible for this concession irrespective of the length of his service in the Department.

NOTE.—The period of apprenticeship, if followed by appointment against a working post on the Railways, may be treated as Railway Service for the purpose of age concession.

(c) The upper age-limit of 25 years will be relaxable up to 30 years also in respect of candidates for the Telegraph Engineering Service, Class I who hold substantively permanent posts in the Posts and Telegraphs Department or have continuously held for a period of not less than two years on the 1st August 1964 any of the following temporary posts under the Posts and Telegraphs Department, such relaxation being limited to only three examinations.

T.E.S., Class I	1. Repeater Station Assistants.
	2. Foreman or Assistant Foreman Telegraph Workshops.
	3. Temporary Assistant Engineers Workshops.
	4. Engineering Supervisors.
	5. Workshop Supervisors.

(d) The upper age-limit of 25 years will likewise be relaxable up to 30 years in respect of candidates for the Indian Ordnance Factories Service, Class I who hold substantively permanent appointments at the Ordnance Factories such relaxation being limited to only three examinations.

(e) The upper age-limit prescribed above will be further relaxable :—

- (i) Up to a maximum of five years if a candidate belongs to a Scheduled Caste or a Scheduled Tribe.
- (ii) Up to a maximum of three years if a candidate is a resident of the former French Settlements which have now become part of India and has been receiving his education through the medium of French.
- (iii) Up to a maximum of four years if a candidate belongs to the Andaman and Nicobar Islands.
- (iv) Up to a maximum of three years if a candidate is an Indian citizen and is a repatriate from Ceylon.
- (v) Up to a maximum of three years if a candidate is a resident of the former Portuguese Territories of Goa, Daman and Diu in India.

N.B.—(i) A candidate who is admitted to the examination under the age concession mentioned in paragraphs 5(b), 5(c) and 5(d) above will not be eligible for appointment if after submitting the application he resigns from service either before or after taking the examination. He will, however, continue to be eligible if he is retrenched from the Service or post after submitting the application.

(ii) A candidate who, after submitting his application to his department, is transferred to other department/office, will be eligible to compete under departmental age concession for the Service, for which he would have been eligible, but for his transfer, provided his application, duly recommended, has been forwarded by his parent department.

SAVE AS PROVIDED ABOVE THE AGE LIMITS PRESCRIBED CAN IN NO CASE BE RELAXED.

DEPARTMENTAL CANDIDATES MUST OBTAIN PREVIOUS PERMISSION OF THE HEAD OF THE DEPARTMENT TO APPEAR FOR THE EXAMINATION.

6. A candidate must have—

- (a) obtained a degree in Engineering from a university incorporated by an Act of the Central or State Legislature in India or other educational Institutes established by an Act of Parliament; or
- (b) passed Sections A and B of the Associate Membership Examination of the Institution of Engineers (India), or have any other educational qualifications recognised by that institution as exempting from passing these Sections; or
- (c) obtained an Engineering degree of one of the Universities mentioned in Appendix I under the conditions prescribed in that Appendix; or
- (d) passed the Honours Diploma Examination in Civil, Mechanical or Electrical Engineering of the Loughbrough College, Leicestershire provided the candidate has passed the common preliminary examination or has been exempted therefrom; or
- (e) obtained the B.E. (Tele-communications) degree awarded by an Indian University; or
- (f) passed the Graduate Membership Examination of the Institution of Tele-communication Engineers (India); or
- (g) passed the Graduate Membership Examination of the British Institution of Radio Engineers, London, held after November 1959.

The Graduate Membership Examination of the British Institution of Radio Engineers, London, held prior to November 1959 is also acceptable, subject to the following conditions :—

- (1) that the candidates who have passed the examination held prior to November 1959, should have appeared and passed in the following additional subjects :
 - (i) Principles and applications of Electrical Engineering (in accordance with the syllabus prescribed in Section A of Post-1959 Scheme).
 - (ii) Mathematics II (in accordance with the syllabus prescribed in Section B of Post-1959 Scheme).
- (2) that the candidates concerned should produce a certificate from the British Institution of Radio Engineers, London, in fulfilment of the condition prescribed at (1) above.

NOTE 1.—Qualifications (e), (f), (g) and qualification (b) in so far as it relates to exempting holders of the B.E. (Tele-communication) Degree from passing the sections referred to therein will be applicable only to those candidates who are competing for Signal Engineering Department, Electrical Engineering Department and Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways and the Telegraph Engineering Service, Class I.

NOTE 2.—In exceptional cases, the Commission may treat a candidate, who has not any of the qualifications prescribed in this rule as educationally qualified provided that he has passed examinations conducted by other institutions, the standard of which, in the opinion of the Commission, justifies his admission to the examination.

NOTE 3.—A candidate who has appeared at an examination the passing of which would render him eligible to appear at this examination, but has not been informed of the result, may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply provided that the qualifying examination is completed before the commencement of this examination. Such a candidate will be admitted to the examination, if otherwise eligible, but the admission would be deemed to be provisional and subject to cancellation if he does not produce proof of having passed the examination, as soon as possible, and in any case not later than two months after the commencement of this examination.

7. No candidate shall be admitted to the Examination unless he holds a certificate of admission from the Commission.

The decision of the Commission as to the eligibility or otherwise of a candidate for admission to the Examination shall be final.

8. A candidate found guilty of impersonation of submitting fabricated documents or documents which have been tampered with or of making statements which are incorrect or false or suppressing material information or of using or attempting to use unfair means in the examination hall or otherwise, resorting to any irregular or improper means for obtaining admission to the examination or of misbehaviour in the examination hall, may, in addition to rendering himself liable to a criminal prosecution, be debarred either permanently or for a specified period—

- (a) by the Commission from admission to any examination or appearance at any interview held by the Commission for selection of candidates; and
- (b) by the Central Government from employment under the Government.

9. Any attempt on the part of a candidate to obtain support for his candidature by any means may disqualify him for admission.

10. The examination under these rules shall be conducted by the Commission in the manner prescribed in the regulations which form Appendix II to these rules.

11. Candidates must pay the fees prescribed in Appendix III. No claim for a refund of the fees will be entertained except to the extent stated in that Appendix, nor can the fees be held in reserve for any other examination or selection.

12. Candidates who obtain such minimum qualifying marks in the written examination as may be fixed by the Commission in their discretion shall be summoned by them for an interview for a personality test.

After every examination, candidates will be arranged by the Commission in order of merit as disclosed by the aggregate marks finally awarded to each candidate, and in that order so many candidates up to the number of unreserved vacancies as are found by the Commission to be qualified by the examination and are considered by Government or the appointing authority, as the case may be, to be suitable in all other respects, shall be appointed :

Provided that any candidate belonging to the Scheduled Castes or the Scheduled Tribes who though not qualified by the standard prescribed by the Commission for any service, is declared by them to be suitable for appointment thereto with due regard to maintenance of efficiency of administration, shall be entitled to be appointed to vacancies reserved for members of the Scheduled Castes and the Scheduled Tribes, as the case may be, in that service.

Success in the examination confers no right to an appointment, unless Government are satisfied, after such an enquiry as may be considered necessary that the candidate is suitable in all respects for appointment to the public service.

Note.—The form and manner of communication of the result of the examination to individual candidates shall be decided by the Commission in their discretion.

13. A candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the discharge of his duties as an officer of the Service. A candidate who (after such physical examination as Government or the appointing authority, as the case may be, may prescribe) is found not to satisfy those requirements will not be appointed. All candidates who are declared qualified for the Personality Test will be physically examined at the place where they are summoned for interview, either immediately before or after the interview. Candidates will have to pay a fee of Rs. 16.00 nP. to the Medical Board. The fact that a candidate has been physically examined will not mean or imply that he will be considered for appointment.

In order to prevent disappointment candidates are advised to have themselves examined by a Government Medical Officer of the standing of a Civil Surgeon, before applying for admission to the examination. Particulars of the nature of the medical test to which candidates will be subjected before appointment and of the standards required are given in Appendix IV of the documents which will be supplied to candidates, *vide* sub-para. 2 of para. 4 of the Notice.

APPENDIX I

List of University degrees which will be recognised for admission to the examination [vide para 6(c) of the Compendium of Rules].

Aberdeen.—B.Sc. Engineering (Honours or Ordinary degree).

Cambridge.—Ordinary B.A. degree in engineering provided the graduate has passed in the principal subjects, Engineering I, Engineering II, and Engineering III.

Durham.—B.Sc. in Marine Engineering.

Glasgow.—B.Sc. in Naval Architecture (Honours or Ordinary degree).

Note.—The above degrees will be accepted only if taken after three years' study and passing the regular examinations in the several Universities. The conditions as to three years study will not, however, apply to Indians who, having taken an Indian degree which exempts them from part of the University course, shall have taken one of the above degrees in less than three years in accordance with the regulations of the University concerned.

APPENDIX II

I.—The examination shall be conducted according to the following plan :—

PART I

Compulsory and Optional papers as noted below against each Service. The duration of each of the papers except 'General Knowledge' will be of 3 hours. The duration of the paper 'General Knowledge' will be of 2 hours.

PART II

Personality test for such candidates as may be called by the Commission carrying a maximum of 300 marks.

II.—The following will be the subjects for the written examination :—

A. Indian Railway Service of Engineers—

Subjects	Maximum Marks
(a) Compulsory—	
(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
<i>Paper I—</i>	100
(i) Building Materials and Building Construction	200
(ii) Design of Structures	
<i>Paper II—</i>	100
Roads, Railways (General Principles governing the design of Railways, Roads, Harbours and other works).	200
(5) Surveying	100
(6) Sanitary Engineering and Water Supply	100
TOTAL	800
(b) Optional.—Any two of the following subjects :	
(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Architecture and Town Planning	100
(5) Mechanical Engineering	100
B. Electrical Engineering Department—	
(a) Compulsory—	
(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Mechanical Engineering	200
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
TOTAL	800

Subjects	Maximum Marks
(b) Optional—Any two of the following subjects :	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mathematics	100
(3) Surveying	100
(4) Electrical Communication Engineering	100
(5) Workshop Organisation and Management	100
C. Signal Engineering Department—	
(a) Compulsory—	
(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Electrical Engineering	200
(4) Electrical Communication Engineering	200
(5) Mechanical Engineering	200
TOTAL	800
(b) Optional—Any two of the following subjects :	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mechanics (as under item 5 under Schedule to Appendix II)	100
(3) Applied Mathematics	100
(4) Construction	50
<i>Paper I—</i>	
(i) Building Materials and Building Construction	100
(ii) Design of Structures	
<i>Paper II—</i>	50
Roads, Railways (General Principles governing design of Railways, Roads, Harbours and other works).	100
(5) Workshop Organisation and Management	
(6) Applied Electronic Circuits	100
D. Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of Indian Railways—	
(a) Compulsory—	
(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200
(4) Theory of Machines and Machine Design	200
(5) Prime Movers	200
TOTAL	800
(b) Optional—Any two of the following subjects :	
(1) Hydraulics and Hydraulic Machines	100
(2) Electrical Engineering	100
(3) Metallurgy	100
(4) Workshop Technology	100
(5) Physics (including Electricity and Magnetism)	100
(6) Workshop Organisation and Management	100
E. and F. Central Engineering Services, Class I and Class II—	
(a) Compulsory—	
(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	
<i>Paper I—</i>	100
(i) Building Materials and Building Construction	200
(ii) Design of Structures	
<i>Paper II—</i>	100
Roads, Railways (General Principles governing the design of Railways, Roads, Harbours and other works)	200
(5) Surveying	
(6) Sanitary Engineering and Water Supply	100
TOTAL	800

Subjects	Maximum Marks	Subjects	Maximum Marks	
(b) Optional— Any two of the following subjects :		(3) Applied Mechanics (as under item 4 under Schedule to Appendix II) ..	200	
(1) Prime Movers	100	(4) Construction : ..	200	
(2) Hydraulics and Hydraulic Machines	100	Paper I		
(3) Electrical Engineering	100	(i) Building materials and Building Construction		
(4) Mechanical Engineering	100	(ii) Design of Structures		
(5) Architecture and Town Planning (For C.E.S. Class I only)	100	Paper II	100	
G. and H. Central Electrical Engineering Services, Class I and Class II—		Roads, Railways (General Principles governing the design of Railways, Roads, Harbours and other works)		
(a) Compulsory—		(5) Surveying	100	
(1) English (including Essay and Precis writing)	100	(6) Sanitary Engineering and Water Supply	100	
(2) General Knowledge	100	TOTAL	800	
(3) Electrical Engineering	200	(b) Optional		
(4) Mechanical Engineering	200	Any two of the following subjects :—		
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200	(1) Prime Movers	100	
TOTAL	800	(2) Hydraulics and Hydraulic Machines	100	
(b) Optional—		(3) Electrical Engineering	100	
Any two of the following subjects :		(4) Mechanical Engineering	100	
(1) Physics (including Electricity and Magnetism)	100	J. Indian Supply Service, Class I		
(2) Electrical Communication Engineering	100	Plan I		
(3) Prime Movers	100	(a) Compulsory—		
(4) Applied Mathematics	100	(1) English (including Essay and Precis writing)	100	
(5) Hydraulics and Hydraulic Machines	100	(2) General Knowledge	100	
I. Indian Inspection Service, Class I (Engineering Branch)		(3) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200	
Plan 1		(4) Theory of Machines and Machine Design	200	
(a) Compulsory—		(5) Prime Movers	200	
(1) English (including Essay and Precis writing)	100	TOTAL	800	
(2) General Knowledge	100	(b) Optional—		
(3) Electrical Engineering	200	Any two of the following subjects :—		
(4) Mechanical Engineering	200	(1) Hydraulics and Hydraulic Machines	100	
(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200	(2) Electrical Engineering	100	
TOTAL	800	(3) Metallurgy	100	
(b) Optional—		(4) Workshop Technology	100	
Any two of the following subjects :		(5) Physics (including Electricity and Magnetism)	100	
(1) Physics (including Electricity and Magnetism)	100	(5) Workshop Organisation and Management		
(2) Electrical Communication Engineering	100	Plan 2		
(3) Prime Movers	100	(a) Compulsory—		
(4) Applied Mathematics	100	(1) English (including Essay and Precis writing)	100	
(5) Hydraulics and Hydraulic Machines	100	(2) General Knowledge	100	
Plan 2		(3) Electrical Engineering	200	
(a) Compulsory—		(4) Mechanical Engineering	200	
(1) English (including Essay and Precis writing)	100	(5) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200	
(2) General Knowledge	100	TOTAL	800	
(3) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200	(b) Optional—		
(4) Theory of Machines and Machine Design	200	Any two of the following subjects :—		
(5) Prime Movers	200	(1) Physics (including Electricity and Magnetism)	100	
TOTAL	800	(2) Electrical Communication Engineering	100	
(b) Optional—		(3) Prime Movers	100	
Any two of the following subjects :		(4) Applied Mathematics	100	
(1) Hydraulics and Hydraulic Machine	100	(5) Hydraulics and Hydraulic Machines	100	
(2) Electrical Engineering	100	K. Indian Ordnance Factories Service, Class I—		
(3) Metallurgy	100	(a) Compulsory—		
(4) Workshop Technology	100	(1) English (including Essay and Precis writing)	100	
(5) Physics (including Electricity and Magnetism)	100	(2) General Knowledge	100	
(6) Workshop Organisation & Management	100	(3) Mechanical Engineering	200	
Plan 3		(4) Applied Mechanics (as under item 5 under Schedule to Appendix II)	200	
(a) Compulsory—		(5) Electrical Engineering	200	
(1) English (including Essay and Precis writing)	100	TOTAL	800	
(2) General Knowledge	100			

<i>Subjects</i>	<i>Maximum Marks</i>
(b) Optional—	
Any two of the following subjects :	
(1) Physics (including Electricity and Magnetism)	100
(2) Applied Mathematics	100
(3) Prime Movers	100
(4) Hydraulics and Hydraulic Machines	100
(5) Workshop Technology	100
(6) Workshop Organisation and Management	100
(7) Theory of Machines and Machine Design	100

L. Telegraph Engineering Service, Class I—**(a) Compulsory—**

(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Electrical Communication Engineering	100
(4) Electrical Engineering	150
(5) Applied Mathematics	100
(6) Mechanical Engineering	150

TOTAL	700
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(b) Optional—

Any two of the following subjects:—

(1) Prime Movers	100
(2) Physics (including Electricity and Magnetism)	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	100

M. Central Engineering Service (Roads), Class I—**(a) Compulsory—**

(1) English (including Essay and Precis writing)	100
(2) General Knowledge	100
(3) Applied Mechanics (as under item 4 under Schedule to Appendix II)	200
(4) Construction :	

<i>Paper I</i>	100	}	200
(i) Building Materials and Building Construction			
(ii) Design of Structures			
<i>Paper II</i>	100		
Roads, Railways (General Principles governing the design of Railways, Roads, Harbours and other works)			

(5) Surveying	100
(6) Sanitary Engineering and Water Supply	100

TOTAL	800
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(b) Optional—

Any two of the following subjects :—

(1) Prime Movers	100
(2) Hydraulics and Hydraulic Machines	100
(3) Electrical Engineering	100
(4) Architecture and Town Planning	100
(5) Mechanical Engineering	100

Note 1.—All papers must be answered in English.

Note 2.—Candidates must write the papers in their own hand. In no circumstances will they be allowed the help of a scribe to write the answers for them.

2. A candidate who takes Surveying as a subject must produce a certificate that he has undergone satisfactory training in surveying including practical surveying in a college or institution recognised by the Commission for the purpose of admission to the competitive examination for the Service. The training must be equivalent to that given in the full course for a degree or diploma in Civil Engineering. The certificate must be signed by the Principal or the Head of the Department of Surveying in the College or Institution.

L322GI/63—3

In exceptional cases, the Commission may accept a Surveying certificate from any other institution, not recognised by them for the purpose of admission to the competitive examination for the Service, if they are satisfied that the practical training in Surveying imparted in that institution would meet the requirements of the Service, and their decision in the matter will be final.

3. The standard and syllabus of the examination will be such as prescribed in the Schedule annexed.

4. The Commission have discretion to fix qualifying marks in any or all the subjects of the examination.

5. The Commission will summon at their discretion only such candidates as they consider suitable for interview for a Personality Test.

6. Special attention will be paid in the Personality Test to assessing the candidates' capacity for leadership, initiative and intellectual curiosity, tact and other social qualities, mental and physical energy, powers of practical application and integrity of character.

7. From the marks assigned to candidates in each subject such deduction will be made as the Commission may consider necessary in order to secure that no credit is allowed for merely superficial knowledge.

8. Deductions up to 5 per cent. of the maximum marks for the written subjects will be made for illegible handwriting.

9. Credit will be given for orderly, effective and exact expression combined with due economy of words in all subjects of the examination.

SCHEDULE TO APPENDIX II**Standard and Syllabus**

The standard of papers in English and General Knowledge will be such as may be expected of an Engineering Graduate. The standard of papers in other subjects will approximately be that of an Engineering Degree examination of an Indian University. There will be no practical examination in any of the subjects.

All answers must be written in English.

1. ENGLISH

Questions to test the understanding of and the power to write English. Passages will usually be set for summary or precis.

2. GENERAL KNOWLEDGE

General knowledge including knowledge of current events and of such matters of every day observation and experience in their scientific aspects as may be expected of an educated person who has not made a special study of any scientific subject. The paper will also include questions on Indian History and Geography of a nature which candidates should be able to answer without special study.

3. APPLIED MATHEMATICS

Statics.—Vectors, Notation of force. Gravitational or Engineers' unit of force. Various kinds of forces. Friction, Composition and resolution of concurrent forces. Moments, Parallel forces and centres of gravity couples. Conditions of equilibrium of non-current coplanar forces. Funicular Polygon.

Kinematics.—Units of space and time. Rectilinear motion; motion of a projectile; angular motion, relative motion; simple harmonic motion.

Kinetics.—Newton's Laws. Absolute system of units. Linear momentum. Impact of elastic bodies. Impulse and impulsive forces, Angular momentum; moments of inertia and radii of gyration; impulsive torque. Centrifugal forces. Conical pendulum. Motion of the centre of mass. Canton railway curves and banking of road-tracks. Hoop stress and stress in the rim of a fly-wheel.

Work, power, kinetic and potential energy. Principle of energy. Kinetic energy due to rotation. Works done by a couple. Principle of Virtual work. Simple machines, mechanical advantage, and velocity ratio. Stable and unstable equilibrium. Deflection in a framed structure. Oscillations. Simple and Compound pendulum. Units and dimensions.

Hydrostatics.—Fluid pressure, its transmission and measurements, density; specific gravity; metric system of units; resultant pressure: centre of pressure; equilibrium of floating bodies; metacentre; Laws of Boyle and Charles. Mixture of gases. Nature and action of simple hydraulic machines.

4. APPLIED MECHANICS

[For Services other than Signal Engineering Department, Mechanical Engineering and Transportation (Power) Department, Indian Ordnance Factories Service, Indian Inspection Service (Engineering Branch—Plan 2) and Indian Supply Service (Plan 1)].

(a) Buildings

Consideration of material used in construction of roof-trusses. Steel and timber. Determination of stress in trusses by various methods. Dead-loads and wind pressure. Factors of safety and working stresses.

Design of roof-trusses.—Various types of roof-trusses and roof coverings; collar beam and hammer beam trusses.

Use of Euler's, Gordon's, Rankine's, Fidler's, Johnson's, and straight line formulae in the design of struts. Buckling factors of struts; curves showing comparative strength of struts obtained by various formulae. Choice of size of sections. Finish of steel work, Joints, Design of end bearings; methods of fixing and supporting ends.

Application of circle and ellipse of stress and Clapeyron's theorem to design of structures.

Cast Iron and Steel Columns.—Flange and web connections to steel columns; caps; bases; transverse bracing of columns.

Foundations.—Safe pressures; foundations for columns. Slab foundations; cantilever foundation; Grillage foundations; Wels; Piles.

Retaining Walls and earth pressure.—Rankine's theory; Wedge theory, Winger's and Bligh's graphical constructions, with corrections. Design of various types of retaining walls in masonry.

Tall Masonry and Steel Chimneys.—Theory and design.

Design of steel and masonry.—Reservoirs with considerations of wind pressure.

Deflection of framed structures and determination of stresses, etc., in redundant frames.

Influence diagrams for bending moment and shear for uniformly distributed and irregular loads on trusses, built-in beams and three-pinned, parabolic semi-elliptic and semi-circular arches.

General principles of dome design.

Principles of Buildings Design; consideration of loads on buildings. Steel Works, girders, etc., for buildings.

(b) Bridges

Design of superstructure. Determination by graphical and analytical methods of bending moment due to moving loads. Wind pressures.

Design of masonry bridges and culverts.

Plate-web girders. Analysis of stresses.

Warren and lattice girders.

Three-pinned arches; doubly pinned and rigid arches.

General consideration on the design of Suspension, cantilever and tabular bridges. Steel-arches bridges, Swing bridges.

(c) Reinforced Concrete

Shears bond and diagonal tension, its nature evaluation and location of reinforcement.

Design of simple and doubly reinforced beams and continuous beams.

Theory and design of reinforced concrete columns and piles.

Design of slab foundations.

Design of simple cantilever and counterfort retaining walls.

Equivalent moments of inertia for reinforced concrete sections.

Theory of elastic deflections and outline of investigation of stresses in reinforced concrete arches.

(d) General

Analysis of stress, analysis of strain, elastic limit and ultimate strength. Relation between the elastic constants. Launhardt-Weyrach formula for working stresses in a structural member and determination of its cross-sectional area. Repetition of stresses. Bending moment

and shearing force diagrams for dead-loads. Graphical determination of stresses in frames; effect of wind pressure, method of sections. Stress in the cross-section of a beam due to bending ($M/I = F/Y = E/R$); compound and conjugated stresses. Rankine's theory of earth pressure, depth of foundations and strength of footings. Grillage foundations; Columb's theory of earth pressure; modification due to Rebahn.

Bending moment and shearing force diagrams for life loads. Analysis of uniform and uniformly varying stress. Elastic theory of bending of beams; bending and shear stresses in beams. Modulus of section and equivalent areas. Maximum and minimum stresses in a joint due to eccentric loading. Stresses in dams and chimneys. Stability of block-work structure. Design of rivetted joint and stresses in boiler shells. Euler's theory concerning struts: modifications due to Rankine, Gordon and others. Torsion. Combine torsion and bending deflections. Encastre beams. Continuous beams and theorem of three moments. Elastic theory of arches. Masonry arches.

5. APPLIED MECHANICS

[For Signal Engineering Department, Mechanical Engineering and Transportation (Power) Department, Indian Ordnance Factories Service, Indian Inspection Service (Engineering Branch—Plan 2) and Indian Supply Service (Plan 1) only].

(a) *Statics*: Forces acting on a rigid body; moments of forces; composition and resolution of forces; friction; machines; efficiency; couples; conditions of equilibrium, with application to simple framed structures and beams; bending moment and shear force diagrams for dead-loads.

(b) *Hydrostatics*: Pressure at a point in a liquid, centre of pressure on an immersed plane area, equilibrium of floating bodies.

(c) *Kinematics (of Motion in a plane)*: Velocity and acceleration of a point; relative motion; acceleration of a point moving in a circular path with uniform speed; simple harmonic motion; velocity-ratio; diagrams of simple mechanisms; instantaneous centre.

(d) *Kinetics*: Force, mass, impulse momentum, works, energy, power; moment of momentum, moment of inertia; their relations and measurements; conservation of energy; conservation of linear momentum; rectilinear motion of a body under a force (constant or variable), equation of motion of a particle; motion of a body in circular path with uniform speed balancing of rotating masses; rotation and oscillation of a body about a fixed axis.

(e) *Hydraulics*: Pressure and velocity change along a streamline; Bernoulli's theorem; flow through an orifice.

(f) *Stress and Strain*: Stress and strain in tension, compression and shear; Hooke's law; Relations between elastic constant; combined stress in two dimensions; circle diagrams; compound bars in tension and compression; elementary consideration of stress due to temperature changes.

(g) Bending moment and shearing force diagrams for live loads. Analysis of uniform and uniformly varying stress: elastic theory of bending of beams; bending and shear stresses in beams; Modulus of section and equivalent areas; maximum and minimum stresses in a joint due to eccentric loading; design of rivetted joints and stresses in boiler shells; welded joints.

(h) *Cylinders*: Thin cylindrical and spherical shells under internal pressure; stress in thick-walled cylinders under internal and external pressure; force and shrink fits.

(i) *Torsion*: Torsion of round bars, transmission of power by shafts.

(j) *Combined Stresses*: Combined bending and direct stress and combined bending and torsion.

(k) *Strain Energy*: Work done in elastic deformation; Stresses due to suddenly applied loads.

(l) *Springs*: Laminated springs and close-coiled helical springs.

(m) *Struts*: Elementary theory of struts with use of empirical formulae.

(n) *Property of materials*: The mechanical properties of materials; composition and properties of the important metals used by engineers; effect of heat treatment, annealing and normalizing; effect of cold work on the properties of metals; elasticity, plasticity, ductility, tenacity, hardness, resistance to shock; resistance of repeated and alternating stress; effect of form and surface conditions; failure under combined stress; creep at high temperatures; considerations affecting the choice of the safe working stress in design.

6. ELECTRICAL ENGINEERING

Direct Current.—Principles of generators and motors. Types and characteristics. Starting and controlling appliances. Methods of testing of generators and motors. Operation in parallel of direct current generations. Types and general features of primary batteries. Testing of primary batteries. Types and testing of storage batteries. Method of charging Boosters and other auxiliary appliances.

Alternating Currents.—Production of alternating currents. Frequency and wave shape. Graphic representation of current, voltage and power in A.C. Circuits. Maximum and "R.M.S." Value of simple sine wave. Effect of resistance inductance and capacity in A.C. circuit. Power and power factor in A.C. circuit. Single phase and poly-phase currents. Connections of poly-phase systems. Power Measurement in poly-phase circuits. Theory of alternator and its regulation. Parallel running. Theory of transformer. Transmission of poly-phase currents. Synchronous motors and Induction motors. Methods of starting. Efficiency and characteristics. Circle diagrams and testing of motors. Improvement of power factor. Motor converter and rotary converter and methods of starting of rotary converter. Principle of automatic voltage regulator.

Electrical Instruments and Measurements.—Principles of construction and theory of measuring instruments for direct and alternating currents. Commercial types. Calibrations of instruments. Measurements of resistances. Ohm-Meters. Types of bridges for measuring resistances. Potentiometer Phase and frequency meters. Synchroscope. Type of wattmeter.

Transmission and Distribution of Electrical Energy.—Systems of supply, economic voltage and size of conductor, Formulae for determination of size of conductor for standard systems of distribution of the load, voltage, etc., being given. Factors influencing voltage drop in D.C. and A.C. transmission lines. Influence of power factor of the load on voltage regulation of a transmission line. Standard equipment of generator and motor control panels for different types of D.C. and A.C. generators and motors.

7. PHYSICS (INCLUDING ELECTRICITY AND MAGNETISM)

Heat.—The methods of calorimetry and thermometry. Vapor-pressures, critical temperature and pressure, Conduction and diffusion of heat and the determination of constants. Radiation and absorption; laws of cooling. Theory of exchanges; methods of measuring radiation, laws of thermo-dynamics; simple applications.

Light.—Velocity of light; Illumination; photometry. Archromatism in lens system; direct-vision spectroscope.

The wave theory.—Simple interference phenomena Huygen's principle explanation of straight line propagation, reflection and refraction of light. Action of mirror lenses, etc. reviewed from this standpoint. Simple diffraction phenomena. Gratings, and wavelengths determination. Spectrum analysis; Doppler's principle. Double refraction and polarization of light; rotary polarization; simple application.

Magnetism.—Forces on a magnet in a magnetic field. Determination of axes and moment of magnet. Magnetic potential level surfaces. Interaction of two short magnets; determination of field strength Magnetic shell; its potential energy in magnetic field. Total normal induction, Gauss' theorem; number of lines of force. Magnetic induction in iron, etc. Theory of magnetism.

The magnetic field of the earth; elements and their variations; the compass and its corrections.

Electricity.—Electric capacity specific inductive capacity. Distribution of electricity on surface of conductors; images. Value of electric force in simple cases of distribution. The mechanical force on charged conductors energy of electrified systems. The dielectric medium; dielectric displacement currents.

Wheatstone's bridge, specific resistance; resistance thermometers. Conductivity of electrolytes; ionization; migration phenomena; accumulators. Standard cells; the potentiometer system of measurement. Thermoelectricity, application of thermo-dynamics; thermoelectric diagrams. Electro-magnetic induction; coefficients of induction; induction coils. Energy of circuit carrying current when placed in a magnetic field; mechanical force on conductors carrying current; moving coil instruments. Lenz's law; illustration from dynamos and motors; etc. Determination of current resistance; E.M.F. in absolute measure. The discharge of a condenser; electric waves. Elementary theory of the electron.

The elementary theory of the continuous current dynamo and motor and of the alternating current dynamo. General principles of the application of electricity to lighting, power transmission; telegraphy etc.

Sound.—The transmission of energy through material media by wave-motion; speed of propagation of waves of permanent type. Nature of musical sounds; pitch; scales. Reflection and refraction of sound; influence of wave-length. The vibration of strings, bars, plates and gas columns; resonance. Interference and diffraction phenomena. Analysis of sound. Measurement of wave-length, velocity and pitch.

8. PRIME MOVERS

Fuel Gas Plants and Boilers.—

Fuel.—

(a) Coal, wood, petroleum, gas, alcohol, etc.; physical characteristics, approximate chemical composition; heat of combustion.

(b) *Gas Plant*.—Gas producers; pressure and suction plants, arrangement and working.

(c) *Boilers*.—Draught; natural, forced and induced. Ordinary forms of stationary, locomotive, marine, water-tube and other type; heating surface, firegrate area; boiler efficiency; super-heaters; feedwater heaters; accessories and management.

Theory of Heat Engines.—

(a) Thermodynamical principles; Carnot's cycle, perfect heat engine; second law.

(b) *Air engines*.—Stirling and other forms.

(c) *Internal Combustion Engines*.—Gas, oil and petrol engines; types and working; features of cycles. Proportioning of mixtures; efficiencies.

(d) *Steam*.—Thermodynamics of the generation, expansion and condensation of steam heat diagrams; etc.

(e) *Steam Engines and turbines*, with special reference to modern developments.

(f) *Refrigerating Plants*.—Theory and general arrangement of the more common types.

(g) *Air Compressors*.—Theory of Pneumatic working. *Generating Plant, Accessories and Details*.—

(a) General arrangements and construction of the more important types.

(b) Condensers air-pumps circulating pumps, cooling tanks, etc.

(c) Carburettors and systems of ignition.

(d) Cylinders, pistons, cross heads, guides, connecting rods, cranks, governors, fly-wheels, valves, and valve gears, glands and pipes.

(e) *Engine-Testing*.—Consumption of steam and fuel, gas and oil; brake and dynamometers; indicators and indicator diagrams.

9. HYDRAULICS AND HYDRAULIC MACHINES

Hydraulics.—Definitions relating to flow of water stream-line motion. Bernoulli's theorem. Venturimeter.

Flow of water through small and large orifices; drowned orifices; sudden enlargements and contractions in flow of water. Time of emptying tanks. Flood absorptive capacity of tanks.

Flow of water over notches and weirs.

Flow of water through pipes; hydraulic gradients; losses of head due to bands contraction and sudden enlargements; losses of head through siphons. Impacts at bends and thrust blocks.

Flow of water in open channels and in pipe; Chezy Bazin. Kutters and other formulae and their applications; cross-sections of greatest efficiency.

Calculations of afflux and back water curve.

Gauging the flow of water in open channels, water-meters.

Hydraulics and hydrostatics of weirs and other canal works.

Hydrokinetics; uniform and steady flow streamline and turbulent motion. Bernoulli's theorem and its application.

Discharge through orifices and mouth pieces, and over notches and weirs. Variable heads. Laws of fluid friction. Head lost due to friction.

Hydraulic Machinery.—Impact of water on fixed and moving vane. Turbines, impulse and reaction. Description of different types of turbines. Determination of vane-angles. Efficiencies of turbine plant. Governing.

Pumps.—Reciprocating centrifugal and turbine.

10. CONSTRUCTION

PAPER I.—(i) BUILDING MATERIALS

Stones.—General characteristics of building stones. Chief varieties and uses. Quarrying, Blasting, Crushing. Screening. Dressing, Machinery and Tools used. Strength. Causes of decay and methods of preservation. Tests. Artificial stone. Manufacture and use.

Bricks and Tiles—

General characteristics, varieties and use. Manufacture. Selecting clay, moulding and burning in kilns, Bull's and Hoffman's kilns, Causes of decay and methods of preservation. Strength. Essentials of good bricks. Mangalore and country tiles. Salt glazed pipes and China clay ware. Terracotta and refractory materials. Cement Block hollow and solid. Cement tiles, flooring, etc. Dados, etc. Machinery used.

Glass and Plastics :—

Glass.—General characteristics, varieties, composition, manufacture and uses. *Plastic.*—Composition, properties and uses of celluloid, bakelite, ebonite, vitrolite, marbarite, etc.

Cement, limes, mortars and concrete :—

Cement.—Composition and manufacture, Storing, varieties and use. Normal rapid hardening and low heat currents, Aluminous Cements; Properties B.S.S., Tests.

Limes.—Hydraulic and fat. Occurrence, collection, burning, slacking and storing artificial hydraulic limes; gypsum; Plaster of Paris. Properties and uses. Tests.

Sand Pozzulona.—Properties, grading fineness, modulus, etc. Tests.

Mortars.—Lime mortars; ordinary and hydraulic. Use of sand and surkhi Composition. Preparation mixing and grinding Storing. Uses. Properties. Strength and tests. Cement mortars. Composition, preparation and use. Properties, gauged mortars. Proportioning of materials in mortars. Effect of water on strength. Mud mortars and effect of water on their strength.

Concrete.—Lime concrete composition, preparation and use, Properties and strength test cement modulus and mixing Water-cement ratio. Properties strength, uses and tests. Water proofing and surface treatment.

Timber.—Varieties, classification, characteristics test and uses of Indian timber. Defect in timber and concrete-constituents—Proportioning, grading, fineness, causes of decay, Seasoning and preservation. Fireproofing. Market and standard sizes for different purposes.

Plywood and pressed wood. Manufacture properties and uses. Proprietary timber products used for sound; thermal products; used for sound and thermal insulation.

Masonry :—

Stone Masonry.—Materials, dressing, laying and jointing, Instruments and tools, Classes of masonry, uncoursed and coursed rubble, random rubble, ashlar and block-in-course. Bonding of stones, Dry stone masonry, Pitching, Lifting devices; scaffolding. Terms used in masonry, Strength of and safeloads on masonry. Plain masonry and brick-work masonry.

Materials, brick laying and bonding, brick nogging. Brick laying in footings damp proof course, isolated columns, piers chimneys, fire places, arches, vaults domes, inverts, centering etc. Reinforced brick work. Scaffolding. Strength of brick masonry. Safe loads on brick work.

Iron and Steel :—

Varieties, classification, composition, characteristics, tests and uses of iron and steel. Important iron ores and their properties. Elements of manufacture of iron and steel by different processes. Modern steels and alloy steels, their properties and uses. Rolling mills for mild steel sections and types of British standard sections for structural steel. Metallic products; pipes, tubes, plain and corrugated iron sheets. Cast iron and steel castings. Flaws in iron and steel.

Preservatives.—Composition, preparation properties, tests and uses of paints, polishes, varnishes, distempers and oils and pigments used.

Miscellaneous—

I. Carbonaceous cementing materials; asphalt and bitumen, natural and artificial asphaltic products. Properties and uses.

II. Asbestos and asbestos cement sheets, masonite, celotex, teetex and other products. Properties and uses.

III. Rubber, leatherfelt, coir and other products, wire ropes, properties and uses.

(ii) DESIGN OF STRUCTURES

Buildings.—Preliminary investigations as to the suitability of site for different types of buildings, trial pits and borings, determination of bearing capacity of soils. Design of residential houses.

Foundations.—(a) General: Structural properties of soil, Principles of mechanics of resistance of soils.

Examination of soils probing sounding and borings; (wash boring, percussion boring, rotary boring) Boring tools. Trial pits. Testing soils for bearing pressure: Direct and indirect tests. Test piles.

(b) Bearing capacity of soils: Rock, clay and sandy soils: alluvium: quicksand. Black cotton soil. Reclaimed soil. Improving bearing capacity of soils by various methods. Transmission of Load to foundations dead load, live load, and wind load. Impact factor. Ratio of live load and dead load.

(c) Shallow foundations. Area of foundations, Spread footings. Timber and steel grillage foundation. R.C.C. Raft inverted arches. Foundations under eccentric loads; boundary footings. Depth of foundations.

(d) Preparation of bed: Demolition. Under-pining. Excavation, shoring and timbering of trenches. Bailing-out water.

(e) Deep foundation: Friction and bearing piles; timber, steel and cast iron piles. Screw piles, Precast cast *in situ* (vibro Franki) concrete piles. Boared piles. Pressure Piles. Pile driving. Safe load on piles; Hiley's formula.

Plain masonry and brick work, floor and roofs carpentry and joinery, stairs columns (scaffolding hoisting appliances for constructions and maintenance of safety measures.

Structural plumbing :—

Fire proof construction.—Protection of timber steel and concrete from fire. Storing room construction.

Thermal insulating properties of masonry and concrete walls and plasters. Insulating boards. Thermal insulation of buildings.

Acoustics of buildings. Use of sound-proofing materials.

Structures.—Columns under bending and shear due to lateral loads. Caps and footings.

Fixed and continuous Beams :—

Rolling loads.—Influence lines for Bending moment and shear for beams. Influence lines for stresses in members of framed girders with straight and curved beams and sub-divided panels.

Detailed design of rivetted and welded connections.

Detail design of plate and lattice girders.

Retaining walls.—Theories of Earth Pressures; effect of surcharge: stability of retaining walls. Elements of soil mechanics.

Deflection of framed Structures: Williot Mohr diagrams. Stresses in redundant frames.

Arches.—Three hinged, two hinged and fixed arches. Influence lines for Bending moment, shear and thrust. Stresses due to loading, temperature and yielding of abutments.

Suspension Bridges.—Three hinged and two hinged stiffening girders.

Analysis of simple rigid frames; Method of distribution of moments, and various other methods.

Simple structures such as rectangular and circular water towards tanks; hemi-spherical, conical and segmental domes; retaining walls with or without counterforts.

Reinforced concrete construction:—

Concrete.—Various mixes and their uses—reinforcements round bars fabrics. Hyrid etc. Bending and placing reinforcement in slabs beams, and columns (Rectangular and T. Beams with single and double reinforcements). Shear and bound stress. Columns under axial and eccentric loads. Simple and combined footings.

Steel Construction.—Beams and girders. Properties of British Standard sections; detailed design of beams, compound girders, built up plate girders and lattice girders, limiting spans and economical depths, designs of flanges and webs, curtailment of flange plates determination of size, pitch and arrangement of rivets; types of stiffeners and rules for their spacing; design of joints and connections; methods of fabrication: detailed design of crane and gantry girders of built-up plate and lattice girder types and typical details of constructions.

Columns and struts.—Plain and built up sections; assumptions regarding end conditions; practical formulae for design; detailed design of stanchions for buildings and of compression members of roof trusses and lattice girders; design and details of caps, bases and brackets for stanchions; joints and splices on stanchions; sizes pitch and arrangements of rivets on flanges of plated stanchions, lacing on stanchions.

Roof trusses.—Types of roof trusses; limiting spans rise and camber; economical spacing data for design; detailed design of members including purlins, joints and connections; wind bracing on roof trusses, detailed design of steel framed sheds.

Bridges:—

General principles of design—alignment, number of spans, economic spans water-ways calculations, depth of foundation. Scour depth, afflux clearance etc.

Loading:—

Dead load, live load, impact factors—loading on road and railway bridges.

Substructures.—Abutments, wing walls and piers conditions of stability, types, design and construction—foundations.

Superstructures.—Different types of Road and Railway bridges. Choice of material and type. Bridge floors. Wearing surface of bridges. Methods of erection. Maintenance and preservation.

Culverts.—Box, pipe and Irish culverts. Cause ways and submersible bridges, general principles of construction.

Approaches.—Influence of conditions of approaches on the selection of the type of bridges—Construction of approaches.

PAPER II

General principles governing the design of Railways, Harbours, Aerodromes and other works.

Railways.—Permanent way—Ballast, sleepers, rail chairs and fastenings.

Points and crossings.—Details of construction, different types, turnouts, cross-over formulae and practical rules for setting out.

Plate laying and maintenance of track, super elevation, creep of rails, ruling gradient Compensation, tract resistance tractive effort. Station yards and machinery, station buildings, platforms, sidings, signals and signal mechanism, staff quarters. Engine sheds turn tables, water columns, aspits etc.

Level crossings in mountain railways.

Tunnels and their alignments and methods of construction.

Road.—Classification of roads—Estimation of traffic, availability of materials and choice of type of roads, tests of materials, gradient camber. Road foundation and underdrainage, road surfaces, water bound macadam, tar sprayed macadam, tar macadam hot and cold emulsions, bituminous carpets, stone paving, wood block paving, asphalt roads, plain and reinforced concrete roads. Standard specifications; resistance to motion of vehicles and influence of various roads surface. Machinery employed—latest advances in highway engineering. Road signs and traffic control. Arboriculture.

Harbours, and other work:—

Physical geography in relation to docks and harbours: natural phenomena, prevalence and intensity of winds, coastal change; accretion and denundation; effect of artificial interference; tidal phenomena; waves form, height and length, wave velocity and wave action.

Objects of docks and harbours; consideration effecting choice of site; entrances to docks and harbours; foreshore protection and channel regulation; wet dry and floating docks; tidal basins and harbour, different forms and types, details and methods of construction. Lock gates, their construction and working, machinery employed. Different types of quay walls, their construction and maintenance; signals and light-houses, ferries and landing piers. Description of important existing docks and harbours. Latest advancement in dock and harbour engineering.

Aerodromes:—

Aerodromes, their importance and spacing position and relation to the air zone. Runways, Orientation. Flying Obstructions.

Economics of aerodrome operation:—

Location of auxiliary buildings and traffic control in the vicinity of aerodrome and their effect on design. Location and design of terminal buildings. International standards.

11. SURVEYING

Surveying.—Construction of Scales. Conventional signs, Use and adjustment of instruments. Theory of levelling, simple, compound check and reciprocal levelling. Various causes of errors in levelling. Elimination of such errors. Customary limits for errors. Method of keeping various styles of field-books. Use of boning rods, Chain survey. Chain and compass survey.

Theodolite.—Traversing by Gales traverse system for city and town improvement surveys. Source of errors and required precision in traversing. Traverse tables, Theory and use of the simple plane-table and tangent clinometer, with and without the magnetic compass. Theory and use of the stadia method of plane tabling with levelled heights and reductions of distances and heights by slide rule. The three-point problem of plane-tableing by resection from within and without the triangle. Geometrical and trigonometrical proof of the three-point problem. The two-point problem with and without the magnetic compass. Triangulation with reciprocal value; heights of stations; base line measurements. Finding value of position by observations to three known points. Computation by rectangular co-ordinates with convergency correction.

Contouring the triangulated areas by the heights calculated from the reduced levels. Longitudinal and cross-sections run with a level. The location on the map of a road railway canal or weir, etc. The general principles of tunnel alignment and of carrying surface meridians underground for mine-surveys. Discussion on the latest patterns of instruments.

Practical Astronomy.—Instruction in spherical trigonometry up to the solution of the spherical triangle and the adoption of Napier's rules of circular parts. Definitions; systems of celestial co-ordinates, the reason for sidereal, sun and mean time; acceleration retardation and equation of time. The Julian and Gregorian calendars; time and the various astronomical corrections.

Finding the meridian of a place by observations to the sun or a star at upper culmination by equal altitudes, by the sun or stars not in the meridian and by circumpolar stars at elongation; and finding time by the sun or stars on the meridian and ex-meridian; finding latitudes by Polaris and circum-meridional observations. Use and constructions of sun dials.

Railway curves and Alignment.—Theory of curves, curves laid out with the aid of angular instruments with one theodolite. Curves laid out by linear measurement only.

By-chords and off sets (several methods). By off sets inside the Curve with certain ordinates from the long chord. Curve with certain given data to pass through a ruling point. Compound curves. Diversion curve. Vertical curves. Curves spiral or transition line. Setting on pegs for earth work. Computation of areas of cross-sections, etc.

12. SANITARY ENGINEERING AND WATER SUPPLY

General.—Elementary Bacteriology and Chemistry of water and sewage.

Water Supply.—History and development of public water supplies; sources of Supply. Standards of purity for public water supplies, Quantity supplied *per capita* intakes. Pumping and gravity schemes. Water towers. Purifications, slow and rapid sand filtration. Sterilisation. Clear water reservoirs, Softening Pipes. Valves and fittings. Distribution of water. Detection and prevention of waste. Metering.

Sanitation.—Site and orientation of buildings. Damp proof courses ventilation. Air conditioning. House drainage. Conservancy and water-borne systems. Sanitary appliances. Constructions and testing of house drains. Pail depots. Public latrines and urinals.

Prevention of Malaria incidental to engineering construction

Sewerage.—Separate, combined, and partially separate systems. Forms cross-sections, capacities and inclinations of sewers. Construction of sewers. Calculations of storm water. Storm water overflows, syphons. Lifts ejectors and pumps for sewage. Manholes and lamp eyes. Flushing of sewers.

Sewage disposal.—Characteristics and composition of sewage, Essentials with regard to sewage treatment. Selections of site for disposal works. Disposal at dilution and treatment. Simple sedimentation and chemical precipitation. Contact beds. Percolating filters. Septic tanks. Imhoff tanks. Activated sludge process. Sludge disposal by various methods.

Refuse.—Collection and disposal of refuse.

13. ELECTRICAL COMMUNICATION ENGINEERING

A—TELEGRAPHY

1. *Morse Telegraph Apparatus.*—Description of Signalling, keys, Sounders, Relays, Galvanometers. Balancing boxes, Switches, etc., and their use in Morse Telegraphy.

2. *Morse Circuits.*—(a) Arrangements of apparatus and circuit connection for Simple and Differential and Aridge Duplex working terminal and Repeater offices. Single currents and Double current working.

(b) General Principle of Quadruplex working.

3. *Multiplex Telegraphy.*—(a) Principle of Multiplex Baudot printing. Telegraph. Different methods of working the Baudot system. Double and quadruple working. Descriptions of principal apparatus used in Baudot. Telegraphy including Retransmitter, Trade Transmitters, Key board Perforators, etc., and their use.

(b) Teleprinters working. General principle of the "Stop Start" system of working. Teleprinter and its principle of action. General knowledge of its principal parts.

4. Testing of Lines and Cables and details of apparatus employed for such tests.

5. Power arrangements for Telegraph and Telephone offices. Use of Motor Generators, Rectifiers, charging Boards, Primary Cells and Accumulator.

6. Elementary Principles of Construction of Telegraph Lines.—Description of Underground and Under-water Cables. How they are manufactured and laid.

B—TELEPHONY

1. *Manual System.*—General principles of Magnetic Semi Central Battery, and Central Battery systems of working. Details of Exchange and Sub-office apparatus, and their circuit diagrams including Private Branch office equipments. Protective devices in Exchange and sub-office and at Cable and line Terminals. Details of Party Line working with Selective ringing.

2. *Automatic System.*—General principle of well known systems of Automatic Exchanges. Schematic Circuit diagrams of principal Exchange equipment. Automatic

branch Exchanges. Details of Subscribers' Apparatus for the above systems.

3. *Telephone Transmissions.*—Principles of Transposition of Telephone Circuits. Prevention of Inductive interference on Telephone Circuit. Characteristics of Telephone Circuits. Impedence of Telephone Circuits, and its measurement. Attenuation and Wave length Constants. Decibel and Neper. Mile Standard Cable. Transmission loss measurement. Wave filter Carrier Current working. Telephone Repeater.

Thermionic Valves and their use in Telephony.

C.—RADIO TELEGRAPHY AND TELEPHONY

1. General details of Oscillatory Circuits. Natural Frequency and Wave-length. Logarithmic decrement. Forced Oscillation.

Long Wave and short Wave Radio working. Points of difference between the two systems.

Various methods of Reception and Transmission of Electromagnetic waves. Different types of detectors and their adjuncts.

Thermionic valves as used on wireless Telegraphy and wireless Telephony. Valves as Detectors. Amplifiers, Rectifiers, Modulators and Oscillation Generators. Details of Transmitting and Receiving Circuits. Radiation of Electro Magnetic Waves. Atmospheric effects. Fading. Power plant for Wireless offices. Elementary principle of design of Aerials and Earths for Long and Short wave systems. Directional Transmission and Reception.

14. MECHANICAL ENGINEERING

Theory of Machines and Machine Design

Kinematics.—Method of determining the relative velocities of parts in machines, by calculation and by graphic methods, Velocity and acceleration, diagrams for the ordinary reciprocating engine and for quick return motions. Velocity ratios for toothed gearing including epicyclic gears. Velocity and acceleration in cam gears.

Kinetics.—Balancing of motors and of reciprocating engines, Crank effort diagram of engines and speed variation of flywheels. Governors. Simple causes of vibration problems. Whirling of shafts and torsional oscillations.

Friction.—Power transmitted or absorbed by belt drives and brakes. Friction in gearings. Friction and lubrication of journal and thrust bearings, ball and roller bearings. Screw gears.

Design of fastenings and Machine Parts. Proportions for rivetted, bolted and welded points and fastening, pipe connexions—Crank, rods and levers, valves, pipes and cylinders, bearings, coupling, shafts and keyways. Tooth profile.

Properties and Strength of Materials

Stress and strain tension, compression, and shear.

Hooke's law. Relations between elastic constants.

Simple cases of combined stress in two dimensions. Circle diagram.

Compound bars in tension and compression. Elementary consideration of stress due to temperature changes.

Rivetted and welded joints.

Thin cylindrical and spherical shells under internal pressure.

Stresses in thick-walled cylinders under internal and external pressure.

Bending moments and shearing forces.

Simple theory of beams.

Slope and deflection of cantilevers and freely supported beams for simple cases of loading.

Torsion of round bars. Transmission of power by shafts.

Simple cases of combined bending and direct stress, and combined bending and torsion.

Work done in elastic deformation. Strain energy, Stresses due to suddenly applied loads.

Laminated springs and close coiled helical springs.

Elementary theory of strut with use of empirical formulae.

The mechanical properties of materials. Composition and properties of the important metals used by engineers. Effects of heat treatment, annealing, and normalising. The effect of cold work on the properties of metals. Elasticity,

plasticity, ductility, tenacity, hardness, resistance to shock, resistance to repeated and alternating stress. Creep and elevated temperatures. Common types of machine and instruments for the investigation of mechanical properties. Forms of specimen, procedure in carrying out tests, and methods of expressing results.

Heat Engines

Physical properties of steam; steam tables and their use. Fundamental laws of thermodynamics. Reversible and irreversible process. Ideal and actual cycles. Construction and use of temperature-entropy and heat-entropy charts.

Behaviour of steam in engine cylinders. Jacketing Superheating. Compounding Horse power and steam consumption.

Testing of engines, Indicators and indicator diagrams. Combination of indicator diagrams for multiple expansion engines. Brake and Brake horse-power. Mechanical and thermal efficiencies. Steam consumption and heat balance for steam plants. The steam turbine Steam flow in nozzles and blading. Calculations relating to blading and horse-power. Steam cycles and modern power plants. Regenerative feed heating and steam reheating cycles. Condensing plants; Jet and surface condensers. Air pumps. Air ejectors. Condensate extraction pumps. Fuels. Combustion : air supply and regulation. Analysis of fluid gases. Boilers, Super-heaters. Economisers. Air preheaters. Furnaces. Boiler trials. Valve. Valve gear and valve diagrams. Governing. Crank effort diagrams. Flywheels. Balancing of engines.

The laws of perfect gases. Expansion and compression. Ideal cycles applicable to the internal combustion engine, and their representation by pressure volume and entropy temperature diagrams. Air standard efficiencies. Comparison of actual and ideal efficiency.

General properties of liquid and gaseous fuels. Calorific value and its determination. Combustion. Calculation of air-fuel ratios. Use of exhaust gas analysis. Volumetric efficiency. Gas producer.

The classification and cycles of operation of gas engines, petrol engines and heavy oil engines. Character of combustion process.

The general construction of internal combustion engines. Carburettors. Electrical ignition systems. Fuel pumps and injection systems. Governors and fuel control. Super-charges.

The mechanics of internal combustion engine-speed fluctuation—Balancing.

The testing of internal combustion engines. Apparatus and procedure. Indicators. Characteristics of Indicator diagrams. Fuel consumption and heat distribution. Engine losses. The representation and interpretation of test results.

Hydraulics and Hydraulic Machinery

Pressure of water at a point. Centre of pressure. Pressure on a surface. Flow of water through orifices, notches, and weirs. Laws of Fluid friction. Steady flow in pipes and uniform channels. General phenomena of flow in rivers. Gauging of flow in pipes and open channels. Dynamical similarity. Impact of jets on plane. Types of turbines. General principles of design of turbines. Governing of turbines; types of pumping machinery. General principles of design of centrifugal pumps. Hydraulic cranes and hoists. Hydraulic transmission gear. General principles of hydraulic transmission of power.

15. ARCHITECTURE AND TOWN PLANNING

A. ARCHITECTURE

1. History of Architecture—

Western : The chief periods and styles from ancient Greek to modern.

Indian : Buddhist, Early Hindu, Muslim and Modern.

2. Theory of Architecture—

General principles, Elements of composition. Accommodation and circulation. Balance and proportion. Function. Harmony and Contract Style.

3. Architectural Construction—

Drainage. Foundations. Materials. Walls. Roofing beams, arches and vaults—minor, elements-decoration. Plumbing, heating, ventilating, lighting, acoustics, sanitation, colour.

4. Quantities Estimates, Contracts, Laws—

B. TOWN-PLANNING

1. *History of Town Planning*.—Ancient, medieval and modern. Effects of social changes.

2. *Practice*.—Surveys, General Principles, sites, climate, water supply drainage, transport, Zoning focal centres and their distribution. Highways, Public service and amenities. Uniformity and variety.

3. *Laws*.—Authorities-Contracts, local special Bye-laws. Acquisition of land.

16. THEORY OF MACHINES AND MACHINE DESIGN

Kinematics.—Methods of determining the relative velocities of parts in machines, by calculation and by graphic methods. Simple cases of acceleration diagrams.

Cams.—Harmonic, constant-velocity and constant acceleration types; displacement, velocity and acceleration of follower.

Gears Gearing.—Theory of shape and action of teeth; simple compound and epicyclic trains. Worm gears. Strength and durability of teeth, Engine turning moment diagrams; fly wheels, governors.

Balancing.—Rotating parts, primary balancing of reciprocating parts, including locomotive balancing and secondary balancing of 'in line' engines.

Vibrations.—Body with single degree of freedom; torsional oscillations of shafts with attached masses. Whirling of shafts.

Gyroscope.—Theory and action. Tractive effort and performance curves for vehicles. Friction and Lubrication. Dry friction; friction circle, friction clutches, screws, collar friction. Belt and rope drives.

Analysis of forces in simple mechanisms. Design of parts subjects to pure bending or pure torsion e.g. pin connections; levers; shafting, springs. Simple clutches and flexible joints in shafting.

Design of parts subjected to combined bending, torsion and direct stress, e.g., cranked members; eccentrically loaded connections (bolted and rivetted).

Design involving applications of kinematics e.g., gears and bear wheels; nut and screw mechanisms; cams; lubrication; design of bearings for given loads; use of ball and roller journal and thrust bearings; influence on design of fatigue and stress concentrations.

Design of belts, ropes, pulleys, flywheels, thin and thick pipes.

NOTE.—Candidates will be expected to show competency in making dimensioned hand sketches in good proportion. Drawing instruments may be used.

17. METALLURGY

Elementary consideration of the structure of metals. Crystals, grains, grain boundaries; Construction and interpretation of thermal equilibrium diagrams.

Structure of alloys; eutectics; solid solutions, intermetallic compounds—critical points in straight carbon steel.

Mechanical properties and their assessment. Standard methods of testing elementary effects of mechanical work on structure and physical properties. Fatigue. Creep. Corrosion Plastics properties.

Iron and Steel—

Methods of manufacture; brief outline of pig iron manufacture. The different types of pig iron and their uses; heamatic, basic foundry cold-blast. Wrought iron. Steel-making regarded as a chemical process. Outline of crucible, Bessemer, open-hearths, and electrical furnace practice. Relationship between process and manufacture and specific properties.

Effects of common elements of carbon steel. British Standard Specification for plain carbon steels. Structure of steel ingots as cast. Effects of hot and cold deformation on the structure and mechanical properties of steel. Effects of alloy elements. The common alloy steels. High-speed steels. Classification of straight-carbon and alloy steels according to their uses.

Cast iron.—Malleable cast iron. Moulding Influence of design and section thickness on the structure of iron and steel castings.

Machinability of ferrous metals as affected by composition and treatment.

Non-ferrous metals—

A study of the uses, physical, and mechanical properties of the principal non-ferrous alloys of industrial importance, with special reference to standard specifications. Hot and cold working. Alloys suitable for diecasting. Bearing metals. Relationship between structure and duty.

Heat Treatment of Metals.

General industrial pyrometry.

Normalizing, annealing, quenching, and tempering of plain carbon steels—effects of microstructure and mechanical properties. Case-hardening and nitriding. Temper-brittleness mass effect, strain-ageing.

Grain, growth and recrystallisation ageing.

Heat treatment plan and equipment.

Technology of Working Processes—

(a) Hot stamping and forging. Variation in procedure for different materials. Effect on physical properties and structure. Flow of metal during process. Correct and incorrect fibre direction; evidence of macro-section.

(b) Press work. Suitability of materials. Drawing operations of varying depths and metal flow. Interstage annealing. Material inspection at various stages.

(c) Welding. The effect of electric arc and oxyacetylene processes on materials. Electrodes and fluxes. Structure of welds. Inspection of welds.

(d) Extrusion. Materials available. Type of work possible.

18. WORKSHOP TECHNOLOGY

Material.—The composition, physical property and engineering uses of the more common metals, their alloys such as cast iron, malleable iron, mild steel, medium carbon steel, phosphor bronze and light alloys etc.

Tool steels, carbon and high-speed steels and their suitability for different kinds of tools.

Heat-Treatment.—The relation between the heat treatment and the physical property of plain carbon steels.

The effect of Carbon.—Critical temperatures. Hardening, tempering, annealing, normalizing and case hardening. Types of furnaces. Temperature measurement and Castrol Quenching media.

Manufacturing Process.—An outline of the preparatory processes for forming materials e.g. moulding and casting forgings, drop stamping, rolling and drawing metal bars. Dishing, drawing, pressing and extruding; brazing and soldering welding by Arc, and welding and cutting by acetylene gas blow pipe flame.

Measuring, Gauging and Inspection.—General Principle of interchangeable production and limit gauging.

Standards.—Systems of limits and fits for plain and screwed work. Tolerances limits; clearance, interference. Tolerances associated with different machining operations.

Type of Limit Gauges.—Advantages of adjustable gauges.

Measuring equipment.—Use of surface of plates, squares, micrometers, vernier calipers and height gauges, dial gauges, rules protractors. Conversion factor. Standard workshop gauges, their accuracies and uses.

Cutting Tools.—Cutting action of tools such as hand tools, lathe tools, drills reamers, milling cutters, dies, taps etc. Angles of tools for cutting different materials and purposes. Measurement of tool angles. Cutting speeds and feeds, Estimating machining times.

Machine Tools.—Fundamental principles in the production of machine surfaces. Principal features of construction and function of general purpose machines such as lathes, sensitive drills radial and vertical drilling machines, shaping, slotting, planing and boring machines; plan milling machines, capstan and turret lathes, grinding and lapping machines.

Lubrication.—Types and uses of cutting solutions. Selection and methods of application.

Operation Planning.—Planning the operation layout for production and estimation of floor to floor times for machined parts.

19. WORKSHOP ORGANISATION AND MANAGEMENT

Factory Organisation.—Essentials for a sound system of works organisation. Division of managerial duties. Cost Section, Administrative Division. Technical Division. Works Manager's departments.

Place of the Foreman in Works Organisation.—Choice of Foreman; duties of foreman: maintenance of discipline, supervision and instructions. Attitude towards workers, care of materials, tools and equipment analytical study of machines, men and methods; records maintenance; bonus to foreman.

Workers and working conditions.—The problem of incentives, fair and adequate wages, satisfactory working conditions, fair and sympathetic treatment. Suggestions from employees; day wage system; piece work system; premium or bonus system; profit sharing scheme; what is a fair day's wage; higher wages must result in greater output. Problem of factory discipline; proper time keeping; check on absenteeism; check on loitering. Workers rules and regulations. Efficiency records. Works Committee. Duties and responsibilities of employers and labour. Labour relations.

Stores Organisation.—Functions of the Stores Department. Efficient handling and control of stores. Material issue requisitions; record of material issued. Bin cards; Stores record cards: Duties of Stores Accountants; materials returned from job. Advantages of good store keeping and store recording.

Labour Organisation.—Training of employees; recording of time and performance; time recording metal discs; mechanical time recorder; job cards, piece work cards; piece work rules; overtime slips; pass out slips; preparation of wages sheets and payment of wages for overtime; transfer from one department to another; fines; Works Committees.

Method of remunerating Labour.—Time and day rate system; piece work method; combination of day rate and piece work; bonus methods; high wage plan; collective bonus plans; profit sharing scheme; essential factors for wages as an incentive to efficiency.

Production Organisation.—The Works Planning Department and Progress Department; estimating department; inspection departments and duties of inspection department Budget control; statistical reports; standardisation and mass production; internal transport; tool service; maintenance service, drawing and design service.

Labour Welfare.—Labour welfare activities; hours of work and adequate wages; accident, safety protections; shops cleanliness and sanitation; lighting and ventilation; factory discontent; transport to and from factory; educational facilities; canteen and mess facilities; medical aid; amenities for sports and games; works library.

Maintenance of rigid discipline—

Cost Accounting and Cost Control.—Main elements of costs; material and labour expenses; item usually included in work on cost; office on cost; duties of the cost office; ascertaining of prime cost of articles; methods of record and internal check. work orders; stock orders; pending orders, charging direct materials cost; materials issue requisitions; return of materials to store; transfer of materials from one job to another; material issue; wages etc.; detailed consideration of on cost items. Allocation and distribution of expenses; method of recording works expenses in cost and cost records.

20. APPLIED ELECTRONIC CIRCUITS

Circuit principles involved in the following:—

Vacuum tube amplifiers, typical circuits for different applications; feed back; broadband amplifiers; D.C. amplifiers.

Transistor amplifiers, typical circuits; design for temperature stabilisation.

Low and high frequency oscillators. Conventional circuits, relaxation oscillators; frequency multipliers and dividers; frequency stabilisation.

Pulse and sweep circuits, counting circuits.

Modulators and detectors; typical circuits for amplitude, frequency and phase modulations.

Power supply systems for electronic equipments—rectifiers, filters, voltage regulated power supplies.

Industrial electronic circuits for induction heating, welding and speed control of electric meters.

Typical circuits used in television receivers.

APPENDIX III

FEES

Candidates seeking admission to the examination must pay the following fees :

(a) *To the Commission :*

- (i) Re. 1.00 nP. when asking for application form and connected documents.

This amount should be paid to the Commission by Money Order. Local candidates, however, may pay cash at the counter. The Commission will not accept payment made otherwise.

- (ii) Rs. 81.50 nP. (Rs. 19.62 nP. in the case of candidates belonging to Scheduled Castes and Scheduled Tribes) with the completed application form.

This amount should be paid by means of a Treasury Receipt or CROSSED Indian Postal Orders payable to the Secretary, Union Public Service Commission. The Commission will not accept payment made otherwise.

(b) *To the Medical Board :*

- Rs. 16.00 nP. before examination by a Medical Board, if declared qualified for the Personality Test.

This amount should be paid in cash to the Medical Board through the General Manager of the Railway concerned at the time of Medical examination.

2. Once an application has been considered by the Commission and their decision admitting a candidate to the examination communicated to him, no claim from the candidate for a refund of the fee paid by him to the Commission will be entertained nor can this fee be held in reserve for any other examination or selection. If, however, a candidate is not admitted to the examination by the Commission, a refund of Rs. 75.00 nP. (Rs. 18.75 nP. in the case of candidates belonging to Scheduled Castes and Scheduled Tribes) will be made to him.

APPENDIX IV

REGULATIONS RELATING TO THE PHYSICAL EXAMINATION OF CANDIDATES

These regulations are published for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard. But it must be clearly understood that the Government of India reserve to themselves an absolute discretion to reject as unfit any candidate whom they may consider, on the report of the Medical Board, to be physically disqualified and that their discretion is in no respect limited by these regulations.

ANNEXURE III

Brief particulars relating to the Services/Posts, to which recruitment is being made on the results of this examination.

1. Indian Railway Service of Engineers, the Electrical Engineering Department of the Superior Revenue Establishment of the Indian Railways, the Signal Engineering Department of the Superior Revenue Establishment of the Indian Railways and the Mechanical Engineering and Transportation (Power) Department of the Superior Revenue Establishment of the Indian Railways.

(1) Appointments will be on probation for a period of three years during which the service of the officers will be liable to termination by three months' notice on either side. Probationary Officers will be required to undergo practical training for the first two years. Those who complete this training successfully and are otherwise considered suitable will be placed in charge of a working post, provided they have passed the prescribed departmental and other examinations. It must be noted that these examinations should, as a rule, be passed at the first chance and that save under exceptional circumstances, a second chance will not be allowed. Failure to pass any of the examinations may result in the termination of the service and will in any case involve stoppage of increments.

L322GI/63—4

At the end of one year in a working post, the probationary officers will be required to pass a final examination, both practical and theoretical, and will, as a rule, be confirmed if they are considered fit for appointment in all respects. In cases where the probationary period is extended for any reason, the drawal of the first and subsequent increments on their passing the departmental examinations, and on being confirmed, will be subject to the rules and orders in force from time to time.

On appointment a probationer shall execute an agreement binding himself and one surety jointly and severally to refund in the event of his failing to complete the probation to the satisfaction of the Central Government any moneys paid to him consequent on his appointment as Probationer.

If for any reasons not beyond his control, a probationer wishes to withdraw from training or probation, he will be liable to refund the whole cost of his training and any other moneys paid to him during the period of his probation.

Note (i).—The period of training and the period of probation against a working post may be modified at the discretion of Government. If the period of training is extended in any case due to the training not having been completed satisfactorily, the total period of probation will be correspondingly extended.

Note (ii).—Probationers will also have to undergo training at the Railway Staff College, Baroda. The test in the Staff College is compulsory and a second chance in the event of failure, will not be given except in exceptional circumstances and provided the record of the Officer is such that such a relaxation may be made. Failure to pass the test may involve the termination of service and in any case the officers will not be confirmed till they pass the tests, their period of training and/or probation being extended as necessary.

Note (iii).—In the Signal Engineering Department, on Railways where there are specialised Tele-Communications posts an additional training for a period of six months in Tele-Communications may be arranged in any particular cases.

(2) (a) Probationers will not be permitted to apply for appointment elsewhere or appear for examination or selection for recruitment to other services.

(b) In cases where Probationers have already appeared at the Combined Competitive Examinations prior to their allotment to the Railway Service and qualify for appointment to services other than the Railway Services, the question of their release from Railway Service will be considered only when they are prepared to refund in cash the cost of their training and other moneys paid to them during the period of their probation before they are actually relieved.

(3) Probationers should have already passed or should pass during the period of probation an examination in Hindi in the Dev Nagri script of an approved standard. This examination may be the "PRAVEEN" Hindi Examination which is conducted by the Directorate of Education, Delhi Administration, or one of the equivalent examinations recognised by the Central Government.

No probationary officer can be confirmed or his pay in the time scale raised to Rs. 450.00 nP per month unless he fulfils this requirement; and failure to do so will involve liability to termination of service. No exemption can be granted.

(4) Officers recruited under these rules:—

(a) will be eligible to pensionary benefits; and

(b) shall subscribe to the State Railway (non-contributory) Provident Fund under the Rules of that Fund.

as applicable to railway servants.

(5) Pay will commence from the date of joining service. Service for increments will also count from the same date. Particulars as to pay are contained in subpara (9).

(6) Officers recruited under these rules shall be eligible for leave in accordance with the rules for the time being in force as applicable to officers of Indian Railways. The Leave Rules are, however, liable to revision in the light of the Pay Commission's recommendations. They will not be permitted to retain the present leave Rules, if so decided by the Government.

(7) Officers will ordinarily be employed throughout their service on the Railway to which they may be posted on first appointment and will have no claim, as a matter of right, to transfer to some other Railway. But the Government reserve the right to transfer such officers, in the exigencies of service, to any other Railway or project in or out of India. Officers will be liable to serve in the Stores Department of Indian Railways if and when called upon to do so.

(8) The relative seniority of officers appointed under these rules will ordinarily be determined by their order of merit in the competitive examination. The Government of India, however, reserve the right of fixing seniority at their discretion in individual cases. They also reserve the right of assigning to officers appointed otherwise than by a competitive examination positions in the seniority list at their discretion.

Note.—If the period of training and consequently the period of probation is extended in any particular case due to the training not having been completed satisfactorily, the officer concerned is liable to lose in seniority.

(9) The following are the rates of pay admissible :—

Junior Scale: Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Scale: Rs. 700—(6th year and under)—40—1,100—50/2—1,250.

Junior Administrative Grade: Rs. 1,300—60—1,600.

Senior Administrative Grade:

Indian Railway Service of Engineers & Mechanical Engineering & Transportation (Power) Department Rs. 1,800—100—2,000—125—2,250.

Signal Engineering Department and Electrical Engineering Department Rs. 1,800—100—2,000.

Note (i).—Probationary officers will start on the minimum of the junior scale and will count their service for increment from the date of joining. They will, however, be required to pass any departmental examination or examinations that may be prescribed before their pay can be raised from Rs. 400.00 nP. to Rs. 450.00 nP. P.M. in the timescale.

Increment from Rs. 400.00 nP. to Rs. 450.00 nP. will not be granted if they fail to pass the Departmental examination within the first two years of the training and probationary period. In cases where the training period has to be extended for failing to pass all the Departmental Examinations within the stipulated period, on their passing the departmental examinations after expiry of the extended period of training their pay from the date following that on which the last examination ends, will be fixed at the stage in the time scale which they would have otherwise attained but no arrears of pay would be allowed to them. In such cases the date of future increments will not be affected.

The increments from Rs. 400.00 nP. to Rs. 450.00 nP. and from Rs. 450.00 nP. to Rs. 480.00 nP, may, however, be granted in advance during the period of probation, if the probationary officer passes the first and second departmental examinations respectively in accordance with extant instructions.

Note (ii).—In the case of persons already in Government Service, their pay on appointment as probationer will be fixed in accordance with the rules and regulations in force from time to time.

(10) The increments will be given subject to sub-para to Note (i) under sub-para (9) above, for approved service only, and in accordance with the rules of the Department.

(11) Promotions to the administrative grades are dependent on the occurrence of vacancies in the sanctioned establishment and are made wholly by selection, mere seniority does not confer any claim for such promotion.

(12) In all matters not specifically provided for herein, the probationary officers will be governed by the provisions, of the Indian Railway Codes as amended from time to time and other orders in force issued by competent authorities.

2. Central Engineering Service, Class I, Central Engineering Service, Class II (permanent), Central Electrical Engineering Service Class I and Central Electrical Engineering Service Class II (permanent).

(a) The selected candidates will be appointed on probation for two years. On completion of the period of probation, if they have passed the prescribed departmental examinations and are considered fit for permanent appointment, they will be confirmed in their appointments. Government may extend the period of probation of two years.

If on the expiration of the period of probation or of any extension thereof, Government are of opinion that the officer is not fit for permanent employment or if at any time during such period of probation or extension, they are satisfied that the officer will not be fit for permanent appointment on the expiration of such period or extension, they may discharge the officer or pass such order as they think fit.

Probationers will also be required to pass a test in Hindi before confirmation.

(b) The following are the rates of pay admissible:

Central Engineering Service, Class I and Central Electrical Engineering Service, Class I:—

Junior Scale: Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Scale: Rs. 700—40—1,100—50/2—1,250.

Administrative (Selection) Posts:

Superintending Engineers: Rs. 1,300—60—1,600—100—1,800.

Additional Chief Engineers: Rs. 2,000/- fixed (For Central Engineering Service, Class I only).

Chief Engineer: Rs. 2,250/- fixed (For Central Engineering Service, Class I only).

Central Engineering Service, Class II and Central Electrical Engineering Service, Class II.

Rs. 350—25—500—30—590—EB—30—800—EB—30—830—35—900.

3. Indian Inspection Service and Indian Supply Service:

(a) Selected candidates will be appointed on probation for a period of two years. On completion of the period of probation, the officers if considered fit for permanent appointment will be confirmed in their appointments subject to availability of permanent posts. The Government may extend the period of two years of probation.

If on the expiration of the period of probation or any extension thereof, the Government are of the opinion that an officer is not fit for permanent employment, or if at any time during such period of probation or extension thereof, they are satisfied that any officer will not be fit for permanent appointment on the expiration of such period or extension they may discharge the officer or pass such order as they think fit.

The officers will also be required to pass a prescribed test in the Hindi before confirmation.

(b) The following are the rates of pay admissible:

Grade III—Junior Class I Scale—Rs. 400—400—450—30—600—35—670—EB—35—950.

Grade II—Senior Class I Scale—Rs. 700—40—1,100—50/2—1,250.

Grade I—Administrative Selection Posts—Rs. 1,300—60—1,600.

Super time-scale posts—(a) Rs. 1,800—100—2,000.

(b) Rs. 2,250 (For Indian Supply Service only).

4. Indian Ordnance Factories Service, Class I:

(a) Selected candidates will be appointed as Assistant Managers (Probationers). The period of probation will be three years. The period of probation may be reduced or extended by the Government on the recommendation of the Director General, Ordnance Factories. An Assistant Manager (Probationer) will undergo such practical training as shall be provided by Government and may be required to pass such departmental and language tests as Government may prescribe. The language tests will include a test in Hindi.

On the conclusion of his period of probation, Government will confirm the officer in his appointment. If, however, during or at the end of the period of probation his work or conduct has in the opinion of Government been unsatisfactory, Government may either discharge him or extend his period of probation for such period as Government may think fit.

(b) The following are the rates of pay admissible:—

Assistant Manager—Technical Staff Officer Junior Scale
Rs. 400—400—450—30—600—35—670—EB—35—950.

Deputy Manager/Deputy Assistant Director General
Ordnance Factories—Senior Scale: Rs. 700—40—1,100—
50/2—1,250.

Manager/Senior Deputy Assistant Director General,
Ordnance Factories—Rs. 1,100—50—1,400.

Deputy General Manager/General Manager, Grade II/
Assistant Director General Ordnance Factories, Gr. II—
Rs. 1,300—60—1,600.

General Manager, Grade I/Assistant Director General,
Ordnance Factories, Gr. I—Rs. 1,600—100—1,800.

General Manager (Selection Grade)/Deputy Director
General, Ordnance Factories—Rs. 1,800—100—2,000.

Additional Director General, Ordnance Factories—
Rs. 2,250—125—2,500.

Director General, Ordnance Factories—Not yet fixed.

5. Telegraph Engineering Service, Class I.

(a) Appointments will be made on probation for a period of two years. If, in the opinion of Government, the work or conduct of an officer on probation is unsatisfactory, or shows that he is unlikely to become efficient, Government may discharge him forthwith. On the conclusion of his period of probation, Government may confirm the officer in his appointment if permanent vacancies are available or if his work or conduct has in the opinion of the Government been unsatisfactory, Government may either discharge him from the service or may extend his period of probation for such further period as the Government may think fit.

Officers will be required to pass any departmental examination or examinations that may be prescribed during the period of probation. They will also be required to pass a test in Hindi before confirmation.

(b) Officers will also be required to pass professional and language tests.

(c) The following are the rates of pay admissible.

Junior Scale:—Rs. 400—400—450—30—600—35—
670—EB—35—950.

Senior Scale:—Rs. 700—40—1,100—50/2—1,250.

Junior Administrative Grade:—Rs. 1,300—60—1,600.

Senior Administrative Grade:—Rs. 1,800—100—2,000.

Members (P. & T. Board)—Rs. 2,250.

6. Central Engineering Service (Roads), Class I.

(a) The selected candidates will be appointed as Assistant Engineer Consultant on probation for two years. On the completion of the period of probation, if they are considered fit for permanent appointment, they will be confirmed as Assistant Engineer Consultant if permanent vacancies are available. The Government may extend the period of probation of two years.

If on the expiration of the period of probation or of any extension thereof, Government are of the opinion that an Assistant Engineer Consultant is not fit for permanent employment or it at any time during such period of probation or extension they are satisfied that an Assistant Engineer Consultant will not be fit for permanent appointment on the expiration of such period or extension, they may discharge the Assistant Engineer Consultant or pass such order as they think fit.

The officers will also be required to pass a test in Hindi before confirmation.

(b) The following are the rates of pay admissible:

Junior Class I posts (Assistant Engineer Consultant)—
Rs. 400—400—450—30—600—35—670—EB—35—950.

Senior Class I (Selection) Post (Divisional Engineer Consultant)—Rs. 700—40—1,100—50/2—1,250.

Administrative (Selection) Class I Posts: Planning Officer—Rs. 1,300—60—1,600.

Deputy Bridges Officer:—Rs. 1,300—60—1,600.

Deputy Standards Officer:—Rs. 1,300—60—1,600.

Deputy Materials and Plant Officer:—Rs. 1,300—60—1,600.

Senior Planning Officer:—Rs. 1,600—100—1,800.

Deputy Consulting Engineer (Roads):—Rs. 1,600—100—1,800.

(Posts carrying the same scales of pay are interchangeable except that of Deputy Materials and Plant Officer).

Higher Administrative (Selection) Class I posts:

Additional Consulting Engineer Bridges:—Rs. 1,800—100—2,000.

Additional Consulting Engineer (Roads):—Rs. 1,800—100—2,000.

Consulting Engineer (Road Development):—The prescribed scale for the post is under consideration.

7. Posts of Assistant Drilling Engineer, Class I.

Persons recruited to the posts of Assistant Drilling Engineer in the Geological Survey of India will be on probation for a period of 2 years which may be extended at the discretion of Government and they will receive pay in the time scale of Rs. 400—400—450—30—600—35—670—EB—35—950. (Revised). On completion of the probationary period, if they are considered fit for permanent appointment, they will be considered for confirmation according to rules as Assistant Drilling Engineer subject to the availability of substantive vacancies.

The field of promotion to the following posts exists in the Geological Survey of India in the case of persons found fit according to the rules and instructions in the following order:—

(i) Deputy Drilling Engineer—Rs. 700—40—1,100—50/2—1,250.

(ii) Drilling Engineer—Rs. 1,300—60—1,600.

(iii) Chief Drilling Engineer—Rs. 1,600—100—1,800.

The officers recruited to the Geological Survey of India will be required to serve anywhere in India or outside the country.

8. Posts of Assistant Director/Assistant Executive Engineer/Research Officer

Persons recruited to the posts of Assistant Director/Assistant Executive Engineer/Research Officer in Central Water and Power Commission shall be on probation for a period of two years.

The scales of pay for Class I engineering posts in Central Water and Power Commission are as follows:—

Civil and Mechanical posts in the Water Wing

1. Assistant Director/Assistant Executive Engineer/Research Officer—Rs. 400—400—450—30—600—35—670—EB—35—950.

2. Deputy Director/Executive Engineer—Rs. 700—40—1,100—50/2—1,250.

3. Superintending Engineer/Director (Ordinary Grade)—Rs. 1,300—60—1,600—100—1,800.

4. Director (Section Grade)—Rs. 1,800—100—2,000.

5. Chief Engineer—Rs. 2,000 (fixed).

Electrical and Mechanical posts in the Power Wing

1. Assistant Director/Assistant Executive Engineer/Research Officer—Rs. 400—400—450—30—600—35—670—EB—35—950.

2. Deputy Director/Executive Engineer—Rs. 700—40—1,100—50/2—1,250.

3. Superintending Engineer/Director (Ordinary Grade)—Rs. 1,300—60—1,600—100—1,800.

4. Director (Selection Grade)—Rs. 1,800—100—2,000.

5. Deputy Chief Engineer—Rs. 1,800—100—2,000.

6. Chief Engineer—Rs. 2,000 (fixed).

9. Other permanent/temporary posts carrying generally the following Scales of pay:—

(i) Rs. 400—950.

(ii) Rs. 350—900.

Advertisement No. 13

Applications are invited for undermentioned posts from Indian Citizens; subjects of Sikkim and persons of Indian Origin migrated from Pakistan with intention of permanently settling in India, subjects of Bhutan, subjects of Nepal and Tibetans who came over to India before 1-1-62 with intention of permanently settling in India subject to issue of certificate of eligibility in their favour. Age as on 1-1-1964 must be within the prescribed age limits Relaxable for Government servants except where otherwise specified. Upper age limit relaxable by 5 years for Scheduled Castes and Scheduled Tribes candidates. No relaxation for others, save in exceptional circumstances; and will in no case be relaxed beyond a limit of three years. Qualifications relaxable at Commission's discretion in case of candidates otherwise well qualified. Higher initial pay may be granted to specially qualified and experienced candidates except where otherwise specified. Particulars and application forms obtainable from Secretary, Union Public Service Commission, Post Box No. 186, New Delhi. Request for forms must specify name of post, advertisement number and item number and should be accompanied by self addressed unstamped envelope for each post at least of size 9" x 4" indicating thereon name of post for which forms are required. Closing date for receipt of applications with treasury receipt or crossed Indian Postal Order for Rs. 7.50 nP. (Rs. 1.87 nP. for Scheduled Castes and Scheduled Tribes) 27th April, 1964 (11th May, 1964 for applicants from abroad). Separate application with separate fee required for each post. Candidates abroad may apply on plain paper if forms are not available and deposit fee with local Indian Embassy. If, required candidates must appear for personal interview. The reservations of vacancies as shown against the individual items included in the advertisement are liable to alteration.

1. One Category B post of Professor of Microbiology, All India Institute of Hygiene and Public Health, Calcutta, Post permanent. Pay.—Rs. 1300-60-1600 plus non-practising allowance @ 25% of pay. Private practice of any kind not allowed. Age.—50 years & below. Qualifications.—Essential.—(i) A medical qualification included in the First or the Second Schedule or Part II of the Third Schedule (other than licentiate qualifications) to the Indian Medical Council Act, 1956. Holders of qualifications included in Part II of the Third Schedule should also fulfil the conditions stipulated in Section 13(3) of the Act. (ii) A post-graduate qualification in Microbiology or Bacteriology e.g., M.D. (Bact.), Ph. D., D. Bact. or equivalent (iii) Twelve years' standing in the profession with extensive practical and administrative experience in medical research, medical education or public health organisation.

2. One Dairy Bacteriologist and Head of Division of Dairy Bacteriology, National Dairy Research Institute, Karnal, Ministry of Food and Agriculture. Post permanent but appointment is to be made on temporary basis. Pay.—Rs. 1300-60-1600. Age.—50 years & below. Qualifications.—Essential.—(i) Doctorate based on work in Dairy Bacteriology. (ii) About ten years' research experience in Bacteriology/Microbiology as evidenced by published papers. (iii) Teaching experience.

3. 5 Deputy Managers (Engineering), Heavy Vehicles Factory, Avadi, Ministry of Defence. Posts temporary but likely to continue and be made permanent. Two posts for Scheduled Castes and one post for Scheduled Tribes are reserved if such suitable candidates available; otherwise all the posts will be treated as unreserved. Pay.—Rs. 700-40-1100-50/2-1250. Age.—40 years and below. Qualifications.—Essential.—(i) Degree in Mechanical Engineering (and/or Metallurgical Engineering for the post involving duties in Forge Unit only) from a recognised University or equivalent; (ii) For one post. About five years' practical experience as a senior Inspector in a large industrial undertaking; should be conversant with modern production methods and quality control. Experience in organising production, inspection of heavy engineering equipment including inspection of raw materials, fabrication, heat treatment, assemblies and testing. Should also be capable of instituting inspection standards as used in an automation industry; For the 2nd post: About five years' experience in machine shop of a general engineering factory with special reference to (a) operation of large size horizontal and vertical turning and boring mills; (b) Planomillers; (c) job setting and (d) speeds and feeds; For the 3rd post: About five years' practical experience in production of Heavy, Medium and Light forgings with counterblow and pneumatic hammers.

Should preferably have knowledge and experience of die design for production of stampings. For the 4th post: About five years' experience in a general Engineering Workshop with particular reference to plate fabrication and preparation and Sheet Metal Works. Knowledge of different types of welding including operation of profile flame cutting machines. Should have experience in plate shear, hydraulic/mechanical presses and copy milling machines. For the 5th post: About five years' practical experience in the design of tools, jigs, fixtures and gauges in an automobile or allied industry of repute of which about two years may preferably have been spent in a responsible position in Tool Room involving manufacture thereof including their heat treatment.

4. Two Assistant Managers (Engineering), Heavy Vehicles Factory, Avadi, Ministry of Defence. Posts temporary but likely to continue and be retained permanently. One post reserved for Scheduled Castes candidate if such suitable candidate available; otherwise will be treated as unreserved. Pay.—Rs. 400-400-450-30-600-35-670-35-950. Age.—40 years and below. Qualifications.—Essential.—(i) Degree in Mechanical Engineering from a recognised University or equivalent; (ii) For one post: About three years' experience in a Tool Room of a modern factory; experience in the fabrication of jigs, tools, fixtures and manufacture of production and inspection gauges, knowledge of operation of precision tool room machinery like jig borers, optical profile grinding machines. For the other post: About three years' experience in machine shop of a general engineering factory with special reference to (a) operation of large size horizontal and vertical turning and boring mills (b) Planomillers (c) job setting and (d) speeds and feeds.

5. 16 Assistant Managers (Mechanical Engineering) for Artisan Training Schools at Khamaria, Kanpur, Ishapore, Nagpur and Ambarnath, Ministry of Defence. Posts temporary but likely to continue. Three posts are reserved for Scheduled Castes if such suitable candidates available; otherwise all the posts will be treated as unreserved. Pay.—Rs. 400-400-450-30-600-35-670-35-950. Age.—40 years and below. Qualifications.—Essential.—(i) Degree in Mechanical Engineering of a recognised University; (ii) About three years' practical experience in an Engineering Teaching or Training Institution.

6. One Assistant Director (Chemistry), Central Forensic Science Laboratory, Ministry of Home Affairs. Post permanent. Pay.—Rs. 600-40-1,000-1,000-1,050-1,050-1,100-1,100-1,150 (unrevised scale). Age.—40 years and below. Qualifications.—Essential.—(i) First class M.Sc. degree in Chemistry of a recognised University or equivalent. (ii) About five years' laboratory experience in organic Chemistry.

7. One Assistant Research Officer, Central Marine Fisheries Research Institute, Mandapam Camp, Ministry of Food & Agriculture. Post permanent but appointment on temporary basis. Pay.—Rs. 350-25-500-30-590-30-800-30-830-35-900. Age.—30 years and below. Qualifications.—Essential.—(i) M.Sc. degree in Physics/Chemistry or equivalent. (ii) About two years' research or practical experience in Oceanographic work.

8. One Principal, School for the Mentally Deficient Children, Ministry of Education. Post temporary but likely to continue. Post reserved for Scheduled Castes/Tribes candidate if such suitable candidate available; otherwise will be treated as unreserved. Pay.—Rs. 400-25-500-30-590-30-830-35-900. Age.—40 years & below. Qualifications.—Essential.—(i) Master's Degree in Psychology from a recognised University or equivalent; (ii) Degree/Diploma/Certificate in the education of Mentally Deficient Children; (iii) At least three years' experience of teaching mentally retarded or backward children.

9. One Lecturer in French, School of Foreign Languages, Ministry of Defence. Post temporary but likely to continue. Post reserved for Scheduled Tribes candidate if such suitable candidate available; otherwise will be treated as unreserved. Non-Indians also eligible to apply. Pay.—Rs. 350-25-500-30-650. Age.—45 years & below. Qualifications.—Essential.—(i) High academic qualifications in the French Language; (ii) Good working knowledge of English.

10. One Superintendent, After-care Home for Boys and Girls, Delhi Administration. Post temporary but likely to continue and be retained on permanent basis. Pay.—Rs. 325-15-475-EB-20-575. Age.—35 years & below. Qualifications.—Essential.—(i) Degree of a recognised University; (ii) Diploma in Social Work/Correctional

Administration from a recognised University/Institution; OR About 3 years' experience of Social Work in a responsible capacity in an institution for social service or social welfare.

11. One Librarian, Indian Bureau of Mines, Ministry of Steel Mines & Heavy Engineering. Post permanent but appointment will be made on temporary basis in lien vacancy. Post reserved for Scheduled Tribes candidate if such suitable candidate available; otherwise will be treated as unreserved. Pay.—Rs. 350-25-575. Age.—30 years & below. Qualifications.—Essential.—(i) Degree in Arts or Science of a recognised University; (ii) Diploma in Library Science of a recognised Institution or recognised by Government; (iii) About two years' experience in a responsible capacity in a technical library.

12. 21 Lecturers in D.M. College, Imphal, (a) one in History, (b) two in philosophy; (c) two in Anthropology, (d) one in Political Science, (e) three in Statistics (f) one in Commerce, (g) four in Botany (h) one in Chemistry (i) two in Hindi (j) three in English and (k) one in Manipuri. Posts temporary but likely to be made permanent. Posts at (a) to (i) reserved for Scheduled Castes/Tribes candidates if such candidates available; otherwise to be treated as unreserved. Pay.—Rs. 225-15-360-EB-20-500. Age.—30 years & below. Qualifications.—Essential.—(i) At least Second Class Master's degree of a recognised University or equivalent for posts at (a) to (j)—in subject concerned; for post at (k) in English/Hindi/Bengali/Assamese with Manipuri Vernacular in B.A. (ii) About 3 years' teaching experience.

N.B. : Separate application with separate fee required for each post.

ENGINEERING SERVICES EXAMINATION, 1964

The UNION PUBLIC SERVICE COMMISSION will hold a combined competitive examination at Ahmedabad, Allahabad, Bangalore, Bhopal, Bombay, Calcutta, Delhi, Hyderabad, Jaipur, London, Madras, Patiala, Patna, Shillong and Trivandrum commencing on 17th September, 1964, for recruitment to Indian Railway Service of Engineers; Electrical

Engineering, Signal Engineering, and Mechanical Engineering and Transportation (Power) Departments of Superior Revenue Establishment of Indian Railways; Central Engineering Services, Class I and Class II; Central Electrical Engineering Services Class I and Class II; Indian Inspection Service, Class I (Engineering Branch); Indian Supply Service, Class I; Telegraph Engineering Service, Class I; Indian Ordnance Factories Service, Class I; and Central Engineering Service (Roads), Class I. Age limits on 1-8-1964: 21—25 years for Electrical Engineering and Signal Engineering Departments, and 20—25 years for other Services. Upper age-limit relaxable in favour of Scheduled Castes, Scheduled Tribes, residents of former French Settlements which have now become part of India who have been receiving education through the medium of French, residents of Andaman and Nicobar Islands, Indian citizens who are repatriates from Ceylon, residents of former Portuguese Territories of Goa, Daman and Diu in India and certain categories of departmental candidates. Qualifications.—A degree in Engineering or a pass in Sections A and B of A.M.I.E. (India) or equivalent. A pass in Graduate Membership Examination of Institution of Tele-communication Engineers (India) or a pass in Graduate Membership Examination of British Institution of Radio Engineers, London, held after November, 1959, acceptable for certain Services. Graduate Membership Examination of British Institution of Radio Engineers, held prior to November, 1959, also acceptable subject to certain conditions. Full particulars and application forms obtainable from Secretary, Union Public Service Commission, Dholpur House, D.H.Q.P.O., New Delhi-11, by remitting Re. 1.00 nP. by money order or on cash payment at counter. Candidates must clearly state on money order coupons "Engineering Services Examination, September, 1964" and also give their names and full postal addresses in block letters. Postal orders or cheques or currency notes not acceptable in lieu of money orders. Completed applications must reach Union Public Service Commission by 25th May, 1964 (8th June, 1964, for candidates residing abroad and those residing in Andaman and Nicobar Islands).

VIRENDRA KUMAR

Secretary, UPSC

राष्ट्रीय प्रशासन अकादमी

मसूरी, दिनांक 2 मार्च, 1964

सं० 107/1/62-प्रशासन—2 मार्च, 1964 से तथा आगे अन्य आदेश होने तक, श्री र० सं० का० जोशी को राष्ट्रीय प्रशासन अकादमी (गृह मंत्रालय) मसूरी, में रु० 590-30-830-35-900 के वेतनक्रम में अस्थायी रूप से हिन्दी के सहायक प्रोफेसर के पद पर नियुक्त किया जाता है।

म० अ० श्री राजन, उपनिदेशक (वरिष्ठ) कृते निदेशक

मध्य रेलवे

बम्बई धी० टी०, दिनांक मार्च, 1964

सं० एच. पी. बी./गज/60

श्री के० पी० भेण्डे . . . निर्माण-कार्य निरीक्षक को दि० 20 अक्टूबर 1963 से स्थानापन्न सहायक इंजीनियर (द्वितीय श्रेणी) के रूप में नियुक्त किया गया है।

श्री जी० पी० शर्मा०

.. रेलपथ निरीक्षक को दि० 1 नवम्बर 1963 से स्थानापन्न सहायक इंजीनियर (द्वितीय श्रेणी) के रूप में नियुक्त किया गया है।

श्री जे० एफ० आर० अथैड .

.. रेलपथ निरीक्षक को दिनांक 7 नवम्बर 1963 से स्थानापन्न सहायक इंजीनियर (द्वितीय श्रेणी) के रूप में नियुक्त किया गया है।

श्री बी० आर० कनकटे

.. रेलपथ निरीक्षक को दिनांक 28 नवम्बर 1963 से स्थानापन्न सहायक इंजीनियर (द्वितीय श्रेणी) के रूप में नियुक्त किया गया है।

रत्नलाल

महाप्रबन्धक

